RECORD

SHOUT
SHARE
IT

Sept 5

In Ambulance Cable #1

Sept 5

3 pine pitches in Cascades section
confusion in colors - are rather
yellowy sun, by mixed forest
with mud give.
Pine because of drought. The
Ponderosa stands out
in the mixed and deciduous
stands - yellow, greenish, at
apex of dense dense - can
be easily counted in
estimating woodlots
etc.
Associate R. + Cascades
a peculiar deep green color

Mt. n.w of Wash. 14 000' alt.
Pine patches generally angular
not too easily distinguished, but
their fine texture and even height
is important and probably distinctive
Difference in texture due to small
crowns and close stands of pine
vs large rounded crowns (of
different shades of gray) of the
deciduous trees.

Only a little haze adds much to
difficulty of distinguishing. Cloud
shadows are deceptive, also.

going westward over
Ohio and Indiana the
character of the country
shows striking in the
pattern of fields and
woodlots.
In ~~S~~ eastern Ohio the pattern
is irregular - woodlots
abundant, fields and woodlots
not ~~regular~~ rectangular.
Westward it becomes more
regular, varied principally
by stream drainages
which are wooded.
Still further west these
become fewer. The pattern
almost completely rectangular
and woodlots fewer perhaps
± 5% of total area.

Nearing Chicago ponds become common, and the
pattern becomes a bit less
regular.

HK

Collection and Field Note Book

No. 36

(Sept. 1, 1952 - Oct. 4, 1953)

(34609 - 34924)

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END

F. A Fosberg collection
and field data books #36
beginning with # 34609
ending with 34924

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A BOORUM & PEASE PRODUCT

nos. checked
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1952 Virginia

Fairfax Co.

Sept. 1 – Sleepy Hollow,
1 mi. s. of Falls Church
bottom-land woods,
mainly Liquidambar

34609 Nectria
on dead branches

10
on dead twigs, rare

11 Stereum
on dead branches, common

pileus and gills black

dull pale orange.

1952 Venezuela

Sept. 3-9 Coastal range along road from La Guaira to Caracas

At this time of the year the hills are mostly at least somewhat green, though there are some areas low on the seaward side that are red and eroded. Upward the vegetation becomes more and more luxuriant.

According to the Venezuelans there were formerly thousands of goats on these hills, but they have been completely eliminated now. The acacia was eaten to bare sticks before, is now green and luxuriant.

On the side of the canyon leading up toward Caracas, facing inland, the vegetation is largely acacia and Cereus (peruviana?). This same type is on the lower slopes of the seaward side, a few hundred feet above La Guaira. above it is replaced by a moister broad-leafed type of second growth, with some Inga, etc.

Up the canyon is being built a new and much straighter road - a superhighway. It will have few curves but will reach ~~the~~ the same altitude as it goes over the pass into Caracas as the present La Guaira road. In the construction great scars are being cut into the mountainside.

The mountain to the east of the pass is quite high, well wooded on the upper slopes, and, according to Lasser, has a small paramo on top, with Espeletia.

1952 Venezuela

Sept. 6-7 - Road from Caracas to Maracay

This road runs for a good part of the way through sharply dissected country, slopes averaging 45° or more, with small portions wooded with second growth, mostly covered by Panicum maximum. The forest is largely confined to ravines and canyon-bottoms, steep slopes, etc. Its boundaries are usually quite sharp.

Toward Maracay the road runs in a flat valley bottom, the sides abruptly rising from the edges of the bottom. This valley is largely in cultivation or pasture, with a liberal scattering of Samanea saman and other trees.

Aragua

In the western part of this valley is the large Lago Valencia. This is surrounded, at least on the north side, by a broad belt of ~~scrub~~ herbaceous vegetation, very uniform in appearance, said by Dr. Tamayo to be Acnida.

nos checked

labels typed

1952 Venezuela

Sept. 7 - Rancho grande National Park.

34612 Cinchona pubescens Vahl
14 one tree in moist forest in ravine below road

1 13 Besleria
common in undergrowth in wet forest in deep valley

1 14
occasional in wet forest in deep valleys

1 15
common in moist forest on steep ridge

Rancho Grande is situated just east of a gap in a mountain ridge at 1000 m. on the south side of the ridge. The prevailing wind here is from the east, but local winds, of convection origin (?) seem more important. Two of these, one ascending from the seaward, the other ascending the valley from the south, meet at the gap. The south wind seems dominant and wetter. These produce sufficient rainfall to maintain a wet forest, with abundant lianas and epiphytes in the gorge

, 5 m. tall;
red, flowers

tall; fruit

m. tall; flowe
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The walls
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here is no
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with bromeliads
phytes. They
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the bare.
e forest are
riates

Caracas, 24 de marzo de 1954.

Dr. F.M. Fosberg
United States Department of the Interior
Geological Survey
Washington 25, D.C.-U.S.A.-

Dear Dr. Fosberg:

Muchas gracias por su carta y por el informe que me suministró referente al Servival Service Committee.

El sitio donde Ud. coleccionó la muestra de Cinchona está situado entre Guamitas y Rancho Grande a una altura de mas o menos 800 mts.

En unión de Magdalena reciba mis mejores deseos por el bienestar de Ud. y el de la Sra. Fosberg.

Sinceramente,

Tobias Lasser

Tobias Lasser
Apartado 2156
Caracas, Venezuela

+ tables typed

Sept. 7 - Rancho grande National Park.

34612 Cinchona pubescens Vahl
1/4 one tree in moist forest in ravine below road

1/1 13 Besleria
common in undergrowth in wet forest in deep valley

1/1 14
occasional in wet forest in deep valley

1/1 15
common in moist forest on steep ridge

Rancho grande is situated just east of a gap in a mountain ridge at 1050 m. on the south side of the ridge. The prevailing wind here is from the east, but local winds, of convection origin (?) seem more important. Two of these, one ascending from the seaward, the other ascending the valley from the south, meet at the gap. The south wind seems dominant and wetter. These produce sufficient rainfall to maintain a wet forest, with abundant lianas and epiphytes in the gorge

small tree, 5 m. tall; old leaves red, flowers fragrant

950 m. shrub 2 m. tall; fruit bright red.

950 m. shrub 1-3 m. tall; flower crimson red.

sparingly branched, 1050 m. 0.5 m. tall.

running up to the south side of the gap, this characterized by enormous trees of Gianthera and an undergrowth of Gesneriaceae, Heliconia, and various other shrubs and large herbs, with many ferns. The walls are quite steep but irregularly so. There is no proper canopy. The Gianthera trees tower above the others and are loaded with bromeliads and other epiphytes. They have a great expanse of buttresses at the base. Common in the forest are stilt palms (Iriartea

and a clustered Bactris. This has spines up to 1 cm. long on trunk and sheaths. The stilt palms are up to 30 m. tall and have a pyramid a conic arrangement of stilt roots about 2 m. high at base, and it is difficult or impossible to find any trace of the bottom part of the trunks, below where the aerial roots originate.

On the ridges is a slightly drier type of forest, dominated by Brosimum, lacking the Qirianthera, with another palm with a great cluster of closely packed roots at the base. The undergrowth here is a little less dense. The ground is thickly covered with leaves. It is possible to walk freely in this forest, though occasionally necessary to push through loose patches of brush.

On the main ridge above Portachuelo gap is a slightly more scrubby forest with much undergrowth and masses of Pilea, Calathea, etc. A species of Thibaudia is commonly epiphytic, with abundant crimson flowers along the bare elongate branches. The corollas are common in the path beneath the trees in which it grows. There are a few grasses, also, along the trail.

At the bottom of the gap, near the road, there is a great mass of Hedychium, with Pilea and Coleus scutellarioides. On these were seen an extraordinary abundance of insects, both in kinds and individuals. Several vials of beetles were collected. The great number of flies, wasps, etc. were not collected.

Around the great building is a stand of Casuarina equisetifolia, small trees, obviously not in

good condition - needle short, color rather pale.

Low in the valley, toward Maracay, in rather moist thick forest along road, a single small tree of Cinchona pubescens, of an almost glabrous variety was found (3426) This is at one of the lowest altitudes recorded for Cinchona pubescens.

October 19, 19 — Headwaters of Smokeden Branch of Difficult Run, 2.2 miles s.s.e. of Herndon, 50 Road

Mixed forest, principally pine and oak, on rolling ground. In places oaks form almost the entire cover, in places pines make up as much as 1/3. Nowhere is it very dense. Largest trees perhaps 4-5 dm. thick, mostly much smaller.

At this season color change is perhaps 3/4 complete, many leaves have fallen. Populus grandidentata practically bare.

Soil is a yellowish gray silt mixed with a little sand and some small broken quartz. Practically no dark soil on the surface.

General lower story of Vaccinium vacillans and Gaylussacia baccata 5 dm tall, sometimes less. Some admixture of herbs and low shrubs.

450' alt. Two areas on opposite sides of road compared. Terrain similar.

On n.w. side — mixed stand, about 1/3 pines, mostly P. virginiana, incl. a few old "wolf trees" 3-4 dm. diam.

About 1/3 Quercus falcata, trees less than 3 dm.

About 1/3 other oaks (Q. alba, Q. stellata, Q. coccinea, Q. velutina, Q. prinus), Liriodendron, Carya, etc. Very few oaks less than 5 m. tall, mostly 15-20 m.

A very sparse and uneven understory is made up of Cornus florida, sapling Acer rubrum, sapling Nyssa sylvatica, some Viburnum dentatum, etc. tangled somewhat with Smilax glauca.

The Vaccinium-Gaylussacia ground cover is mixed with considerable Chimaphila maculata, some patches of Viburnum acerifolium, a few plants of Cypripedium acaule. In places it is very sparse & lacking. Under the pines is a thick layer of dead needles.

In this area there is no evidence of recent cutting, but there are very old, almost rotted away stumps of what appears to be Pinus echinata about 3-5 dm. thick, also apparently an old road, with many young oaks and a Pinus virginiana "wolf tree" 10" thick growing in it. Ruts still evident.

On the south east side all of the larger trees 4-5 dm have been logged off rather recently (rings still countable but some polypores evident). Most of these stumps are Pine, and, judging from bark, mostly Pinus echinata. Three stumps of Pine counted showed 113, 94, and 75 rings, respectively. All were in general 4-5 dm. size range. In all the inner ⅓ of rings were wide, the outer ⅔ unusually narrow. Two oak stumps did not show this, rings were more or less uniform. One counted had 78 rings.

Q. falcata

This could be interpreted as meaning that the pines grew more or less rapidly until the hardwoods began crowding them, then only grew very slowly, barely holding their own for a long time.

The remaining forest here is principally oak - about equally Q. falcata, Q. primus, Q. velutina, some Q. coccinea, a little Q. alba, Nyssa sylvatica, Pinus virginiana, P. echinata, Liriodendron, and Populus grandidentata. It is ragged and rather open crowned, with a very uneven second story 1-5 dm. tall of oak saplings, Acer rubrum saplings, Sassafras, and Carya saplings, some Cornus florida, ~~Vaccinium stamineum~~, Viburnum dentatum, tangled with a little Smilax glauca and S. rotundifolia.

The Vaccinium-Gaylussacia ground cover rather uneven and with some brambs.

1952 Virginia

Oct. 25 — old clay pit on 18th St. S. west of Pentagon Bldg.

Area rated in 1948 to resemble tall grass prairie seems to have changed very little. Andropogon scoparius and Sorghastrum nutans are codominants, or on the other locally dominant.

Secondary species are Lespedeza cuneata, Solidago spp. Euthamia sp.

On bare spots is a thin lichen and moss carpet.

Scattered plants of a dewberry, and a sparing invasion of Juniperus sabina.

The soil seems to be almost unaltered clay, baked hard and cracked in the current drought.

Other parts of pit almost bare. Slants apparently kept that way by a continued slow wash of clay down from the walls of the pit, forming broad alluvial fan-like deposits, these almost bare. In bottom are polygons resembling frost polygons, but very small, outlined by tiny grasses, etc. Apparently these are really dessication cracks, rather than having to do with frost.

1952 Virginia

Nov. 16 Bull Run Battlefield Park

Small patch of mature Pinus Virginiana, rather sparse.

Nov. 23 Lee Blvd. just e. of Pine Ridge

Patch of Pinus virginiana about ~~20~~ 20-25 m. tall, up to 30 cm. diam., rather sparse crowns forming a thin canopy. Trunks irregularly spaced (1)-2-5 m. apart. Second story principally Cornus florida but with sapling of Fagus and Acer rubrum etc. 3-6-8 m. tall. Scattered Ilex opaca 1-2 m.

Mitchella abundant on ground, mostly sterile, some Lycopodium complanatum and small tree seedlings. No young Pinus. Very little Chimaphila maculata.

4 34616 11 Mitchella repens dense mat on banks at edge of forest, thin network in forest.

Adjacent field with thick sapling P. virginiana stand about 5-6 (8) m. tall, with a few deciduous (Liriodendron, Fraxinus) saplings of same size & larger & smaller. Spacing of pines mostly 1-2 m.

soil brown, this layer about 20 cm., underlain by redbrown B layer. Surface covered by a duff of pine needles and some broad leaves 5-8 cm. thick. Cornus fruits common on ground.

Invasion from all sides by Lonicera, at corners forming tangles, in interior a very thin network of small vines. Fruiting at edges.

~~Pinus~~
Prostrate, dull green; fruits scarlet.

This is separated from the tall stand (above) by an old roadway and fence; from this it is invaded for a few feet by a dense tangle of Lonicera japonica. This spread a few m. farther in but as a thin network of smaller vines. Beyond

now checked
Labels typed

this almost no ground
cover. Scattered plants of
Aster sp., Prunella vulgaris,
Allium vineale, Rubus
sp. (dewberry type), Polystichum
acrostichoides, Goodyera
pubescens, a very few plants
of Fragaria sp., Veronica
officinalis, Asplenium platy-
neuron, Chimaphila maculata,
Monotropa uniflora, and
one of Botrychium dissectum.

Nov. 23 Fairfax Circle
small patch of Pinus
virginiana, medium size,
somewhat spare, somewhat
invaded by Lonicera japonica
especially near edge.
ground cover of ~~also~~ Chimaphila
maculata (abundant), Mitchella

34617 Asplenium platyneuron
rare near edge of fort
18 Polystichum acrostichoides L.
occasional
19 Monotropa uniflora L.
occasional
20 Chimaphila maculata
very common
21 Mitchella repens
occasional

Brown soil 20-25 cm. deep, over
yellow-brown subsoil.
Duff layer 2-4 cm.
~~Rings~~ Pine saplings from
2- cm. thick. all small
ones dead or dying. Rings
counted on 3 trees:
cm. 6 rings
cm. 11 rings
cm. 14 rings.
Seedlings of Liriodendron
growing in spite of shade.

Lycopodium complanatum,
Polystichum acrostichoides,
Asplenium platyneuron, Aster sp.
spreading into denuded
red shale area on both
sides of highway - plant
on s. side up to 1 m. tall,
on n. side, up to 2 (3) m.
spare.
fertile fronds erect.

all plants dead at this
season.
erect. leaves dark dull green.
whitish along veins.
prostrate; fruit scarlet

now checked

1952 Maryland

Labels typed

Nov. 25 - West side of Head of Broad Creek, arm of South River - in thick duff-layer in woods of Pinus virginiana.

~~HHox~~

B4622 Corallorhiza
rare

23 Chimaphila maculata
common

29 Chimaphila umbellata
locally common

old field, with scattered trees

25 Liparis
rare in old field

26 Asplenium platyneuron
abundant in old field

27 Botrychium dissectum v. obliquum
common locally

Pinus virginiana woods

28 Mitchella repens L.
common

29 Lycopodium lucidulum
rare, small colonies

30 Lycopodium complanatum
common, large
spreading colonies.

rhizome white, branched somewhat in one plane; stem bronze-purple; flowers bronze, lip white, ~~and~~ with purple spots along edge.

PLANTS of MARYLAND
Anne Arundel Co.

Mitchella repens L.

Locality West side of head of Broad Creek, arm of South River.

Occurrence Common locally in old field, with scattered trees.

Date November 25, 1952 Alt. m

Coll. F. R. Fosberg No. 34628

Remarks Prostrate; fruit scarlet.

erect

rhizome prostrate, in loose duff layer. fruiting stems erect.

PLANTS of MARYLAND
Anne Arundel Co.

Mitchella repens L.

Locality West side of head of Broad Creek, arm of South River.

Occurrence Common locally in old field, with scattered trees.

Date November 25, 1952 Alt. m

Coll. F. R. Fosberg No. 34628

Remarks Prostrate; fruit scarlet.

PLANTS of MARYLAND
Anne Arundel Co.

Lycopodium lucidulum

Locality West side of head of Broad Creek, arm of South River.

Occurrence Rare, small colonies in old field, with scattered trees.

Date November 25, 1952 Alt. m

Coll. F. R. Fosberg No. 34629

Remarks Erect.

1952 Maryland

Nov. 25 – West side of Head of Broad Creek, arm of South River – in thick duff-layer in woods of Pinus virginiana.

~~Hl 62~~

B 4622 Corallorhiza
rare

23 Chimaphila maculata
common

24 Chimaphila umbellata
locally common

old field, with scattered trees

25 Liparis
rare in old field

26 Asplenium platyneuron
abundant in old field

27 Botrychium dissectum v. obliquum
common locally

*

Pinus virginiana woods with some admixture of hardwoods.

28 Mitchella repens L.
common

29 Lycopodium lucidulum
rare, small colonies

30 Lycopodium complanatum
common, large
spreading colonies.

rhizome white, branched somewhat in one plane; stem bronze-purple; flower bronze, lip white, ~~conical~~ with purple spots along edge. erect, leaves dull green, pale along veins. Forming large colonies from horizontal subterranean rhizomes, these whitish; leaves glossy, dark green above, pale beneath.

erect, leaves dead.

fertile fronds erect.

fronds and stems bronzed.

prostrate; fruit scarlet.

erect

rhizome prostrate in loose duff layer, fruiting stems erect.

1953 Virginia

Feb. 1 - Roaches Run
Waterfowl Sanctuary

Sunny but cold windy day.

Hundreds of ducks on water. Perhaps half are pintails~~x~~. Many of these are sitting along the shore sheltered by overhanging banks. About 1/4 are baldpates and 1/4 are mallards. A small flock of white domestic ducks, 8 in number, are also in the group, as are two coots.

Herring gulls in small numbers on the outer part of pond, some of them flying over the ducks just off the beach, pursuing ducks which get pieces of bread. The ducks can outfly the gulls but the gulls outmaneuver the ducks and usually finally get the bread.

Alnus serrulata is in full bloom.

A continual stream of visitors arrive and depart, mostly bringing dry bread to feed the ducks. An average of 10-15 cars present.

1951 Virginia

March 7 - Bull Run. 3/4 mi. s. of Lee Blvd. ~~N. side of Run~~ 5 mi. W.S.W. of Centreville 50-65 m.

Flat to gently rolling tract of wooded land, about 1 mi. long, along the run, about ½ mi. deep.

Near the run becoming slightly irregular, draining ~~into~~ into the run. An escarpment along the Run about ~~40~~ 40 ft. high, is mostly back 10 to 100 yds. from the water, but in places is almost sheer into the water. Below this is a flat terrace flooded by extreme high water, but usually well above the ~~st~~ level of the stream.

The country rock, exposed in most places along the escarpment, is red to purple Triassic shale, tending to dip westward, toward the Run. Several small brooklets cross the west part of the area, originating in springs some distance back of the scarp. The walls of the ravines slope gently, except the bottom foot or two,

which may be cut in, but are not always.

The soil on this slightly dissected slope is quite thin, dark purplish brown, filled with small shale platelets.

On the flat behind this the ground has no general slope. Part of the drainage is eastward (to Cub Run 2) part westward. There is evidently an impervious layer, as the water table, at this time seems to be practically at the surface. Slight depressions have water in them. This is apparently not a permanent condition as there are no aquatic plants. A very large moss makes up the only distinctive ground cover in these wet places at this season.

All of this land except the extreme south tip is wooded. The south tip is pasture.

The woods is rather peculiar. There is a

scattering of fairly large old trees, mainly oaks. There are more common on the north half a third. Between these is a thin wood, varying from mixed hardwood - oak, hickory, very little tulip, ash, etc to mixed hardwood and pinus virginiana.

The pine is much more common away from the Run, the ~~wood~~ gently dissected land being in the mixed hardwood type. Both of these types and the intermediates have a scattered but very conspicuous ~~layer~~ second story of Juniperus and, away from the Run, Pinus virginiana saplings up to 10 ft. tall. The ground is locally covered by carpets of mosses, and in a few places by Cladonia.

The odd thing about this forest is the small size of all except the few scattered large trees, from 2 to 8" diameter, and the

lack of stumps except very old and thoroughly rotten ones.

If it were not for these old stumps it would seem probable that this is an old field, abandoned 20-30 years ago, though why the undergrowth is almost lacking would be hard to explain.

If there were more and ~~fresher~~ stumps it might have got this appearance by constant and severe logging.

Repeated fires could be responsible, though only one burned log was seen.

The lack of large Juniperus Mr. Clark explained by suggesting that there had been much harvesting of cedar posts. But there are not stumps to support this idea.

It is quite easy to walk in any direction in most of this wood.

along the stream terrace along the Run there is some open ground. Fraxinus and asimina are common, also Betula nigra locally and Platanus locally.

The low shale cliffs, 10-15' high, where the Run comes close to the escarpment are covered with luxuriant mats and cushions of mosses, and patches of ferns. Polypodium vulgare and Asplenium rhizophyllum are common, also Pellaea sp., and Cystopteris? is rather rare. Asplenium platyneuron was seen but on a small slope rather than on the rock ledges.

March 11 (same)

Walked with J.E. Eyler in a large circle about in the center of the area, getting well back of the lines of drainage of the several brooklets ~~in~~ entering Bull Run in this area. Locally near the Run there are abundant signs of,

fire which occurred not too long ago (10-20 yrs.?) On the flat ground at the back, in this section are areas with quite abundant pine, including several small pure even age patches. Juniperus is common throughout, with a few fairly large trees, and some old dead trunks of fair size. Several relatively open areas have a loose scrub of Viburnum prunifolium.

Blow downs and the mounds resulting from them are abundant, but not recent. Most of the trees are almost completely rotted away.

In the thin woods are quite a few dead trees of about the average size of the forest. Possibly for some reason trees here don't get much larger than this.

Thin Lonicera japonica in the part away from the Run, apparently kept in check by cattle. Many signs of grazing here.

Probably if grazing cows were withdrawn the honeysuckle would completely cover everything.

Frank Egler's opinion is that not too many years ago this land was pasture with scattered trees - represented by the occasional wolf-tree here at present and some of the dead skeletons. This ~~pasture~~ became thickly scattered with Juniperus virginiana then gradually a mixture of pine and broad-leafed scrubby growth came in and finally, with considerable grazing all along, reached its present state.

nos checked 1953 Virginia

labels typed March 14 - Fort Scott, Aurora Hills, South Arlington.
Wooded hill-top with earthworks of old Civil War fort.
Mixed deciduous woods, with several fairly large beeches, and common young beeches 1 - 5' m. tall.

134631 Fagus grandifolia

J- 32 Fagus grandifolia

small tree 4 m. tall, trunk pale gray, twigs brown, old leaves persisting abundantly, sapling 1 m. tall, top possibly injured. Small buds on normal twigs, large ones on vigorous leading sprouts.

not checked

Labels typed

1953 Virginia

Fairfax Co.

Mar. 22 - Bull Run. 3/4 - 1½ mi. s. of Lee Blvd. 5 mi. s.s.w. of Centreville 50-65 m. Steep wooded slopes of crumbling reddish Triassic shale, above run.

½	34633	Sanguinaria canadensis L. abundant on bare shaly soil	erect, partly grown leaves glaucous, flowers white, ~~purple~~ reddish, latex orange.
½	34	Dentaria laciniata Muhl. abundant on bare shaly soil	erect, flowers white to purplish.
½	35	Corydalis flavula (Raf.) DC. abundant on bare shaly soil	flowers yellow.
½	36	Selaginella apoda (L.) Fern. common on muddy ground in old wood road	prostrate
⅓	37	Polytrichum commune L. patches on flat ground, common.	erect; sporophytes old.
⅓	38	Leucobryum on flat ground ~~Bluffs~~	pale green cushions
⅓	39	Hepatica americana (DC.) Ker common on ledges and talus	flowers white to purple
⅓	40	edge of ledge	

Bluffs along Run, ledges, shaley slopes - Triassic shale

J3 3F641

common on ledges and banks
(also on flat ground above)

+2 42 Cystopteris
occasional on ledges fertile fronds dead.

+2 43 Dryopteris marginalis (L.) gray
rare on shaly slopes

+1 44 Asplenium platyneuron
common generally

+1 45 Arabis lyrata L.
on ledges rare flowers white

+r 46 Ulmus rubra Muhl.
at base of cliffs small tree 6 m. tall

+1 47 Arabis lyrata L.
shaly slopes flowers white.

+2 48 Cladonia
common on bare ground
at top of slope

+2 49 cladonid
common on bare ground

+2 50
common on bare ground prostrate, lustrous.

+3 51
rare on ledges Prostrate

+3 52 Thuidium
common on ledges
(also on flat ground above)

+2 53 Asplenium trichomanes L.
occasional on ledges

+3 54 Asplenium rhizophyllum L.
local, patches on ledges

+2 55 Polypodium vulgare var.
abundant on ledges

+1 56 Pellaea atropurpurea (L.) Link
occasional on ledges

3465?

common on cliff and ledges

58 ~~common~~

common on ledges

59 Umbilicaria

local on large rocks at foot of cliff, flooded by occasional high water

60

common on cliff & ledges

61

common on ledges

62

occasional on ledges and at top of cliff growing over moss

Flood Plain Terrace a few feet above surface of run, heavy clay soil

63 Erigenia bulbosa (Michx.) Nutt.

common

anthers dark purple, styles purplish, petals white.

64 Viola papilionacea Pursh

rare

leaves gray-green, flowers bright violet.

65 Mertensia virginica

occasional

calyx purple, corolla blue.

66 Erythronium americanum

common. few flowering

leaves mottled with brown, gray green, flowers yellow, brown outside, nodding.

67 Claytonia virginica

common

leaves fleshy, flowers white to pinkish.

Mar. 21 - Gallows Rd. ½ mi. s. of Lee Blvd.

Small wood of Pinus virginiana about 60' tall, slight admixture of broad leafed trees.
Under growth & groundcover species seen.

c. Mitchella repens
c. Chimaphila maculata
lc Chimaphila umbellata
u Polystichum acrostichoides
lc Gordyera pubescens
c Rhododendron nudiflorum
lc Kalmia latifolia
c Rhus toxicodendron
u Lycopodium complanatum
la Vaccinium vacillans
la Gaylussacia baccata

Scale of occurrence: (for pine comm

a abundant (many individu
la abundant locally
c common (a few indi
o ~~Occasional~~ Usually at least
g gregarious (colonies
u uncommon - a few
r. rare - one or two
lc locally common

There obviously had been a ground fire some years ago, as the pines were somewhat blackened at base and some charcoal in the soil (duff layer).

Thin honeysuckle. (Lonicera japonica)

unity investigation

ls in sight in any direction)

viduals in sight at almost any time)
one individual in sight.
of a number of individuals, sometimes connected)
scattered individuals seen.
individuals seen in stand.

1953 Maryland

March 29 - Deale Beach, Chesapeake Bay

Edge of open water lined with a thick sod of grass rhizomes ~~[illegible]~~ filled with mud. The surface of this is at about high tide level and it ~~[illegible]~~ shows evidences in the form of undercutting and collapse, of being attacked by the bay waves. This belt of sod varies from one to five or even ten yards in width. The edge is scalloped irregularly. The sod is principally formed by one or two species of Spartina and has scattered shrubs of Iva frutescens. One one or two points it seems to be underlain by a gravel with pebbles up to ½ or even 1 cm. across, very well worn.

The grass is dry and mostly gone. New shoots are appearing.

Back of the ~~[illegible]~~ belt of sod there is a low uneven beach ridge of quartz sand more or less filled with shells, those of Ostrea, Mytilus, and a considerable [illegible]

Pine stand
Age about
5 m. tall, 1-7"
thick, as dense
that one can
hardly walk
through.
Few trees
but for sparse
mitchella
occasional
Chion. mac.

+ Aster (Lenosa)
In a sparse spot
[illegible]
in dec volume
1" diam. several
stems/clump

Pines 30' high
not very dense
a few an
almost entire
stand of mitchella
& abundant
Chion mac.
new generation
of deciduous
trees coming
in, from 2-5
m. tall Fagus,
Quercus, Cornus florida
[illegible]
Rhus tox. [illegible]
[illegible]
[illegible]

[illegible] on this ridge but on a spot of local higher ground (a yellow rich) rather than really a part of the sand ridge

Pines 50' high
not very dense
a few on
almost entire
stand, mitchella
& abundant
Claytonia
virginica
Trees running
from 1 foot to 3
in. tall together
in one large flock
Liriodendron
Rhododendron
maximum
Pinus strobus
Agaricus
5 in. tall, 1"
thick, but dense
that one can
hardly push
through.
Pinus
strobus
mitchella
repens
Claytonia
virginica
+ Aster (Lateriflorus)
In a spray or shot
of light where the
sun does not reach
1" diam. several
Viburnum alnifolium
Pinus strobus
Rhododendron
maximum
Liriodendron
Mitchella
repens
Claytonia
virginica
Aster (Lateriflorus)

Uniformity of topography, original substratum, and early biotic colonization

High average incidence of typhoons

Probable short length of geological life of any given land surface.

Relative youth of habitat as a whole

limiting factors in development of complexity of flora and fauna, consequently of complexity of biotic communities.

Proximity of sea - consequent high average level of salinity.

Iron deficiency due to high pH

High temperatures, preventing much humus accumulation except under saturated conditions.

~~Mass~~

Distance from sources of suitable species and ocean barrier to their spread

Vicia sp.

small plant of Rio Grande valley
with rather sparse, very small
leaves bearing a pair of small
few veined leaflets and three small
coils. The pale petals, a gentle shade
below pearl ash, not strong,
but very showing color of
Ultramarine and Chinese white
Type of Pod with a few seeds and
a tendril. Many small pods
about 2 - 2½ cm. tall, standing
3 - 4 cm. above Base of Herbaceous stem 3½ cm.

1953 Maryland

March 29 - Deale Beach, Chesapeake Bay

Edge of open water lined with a thick sod of grass rhizomes ~~[illegible]~~ filled with mud. The surface of this is at about high tide level and it ~~[illegible]~~ shows evidences in the form of undercutting and collapse, of being attacked by the bay waves. This belt of sod varies from one to five or even ten yards in width. The edge is scalloped irregularly. The sod is principally formed by one or two species of Spartina and has scattered shrubs of Iva frutescens. One one or two points it seems to be underlain by a gravel with pebbles up to ½ or even 8 cm. across, very well worn.

The grass is dry and mostly gone. New shoots are appearing.

Back of the ~~[illegible]~~ belt of sod there is a low uneven beach ridge of quartz sand more or less filled with shells, these of Ostrea, Mytilus, and a couple of clams. This is from one to two, rarely three feet high, 5 - 8 (to 15) yards wide. It is covered by a scrub of Baccharis halmifolia ranging, ~~[illegible]~~ to pure Iva frutescens. The Baccharis may reach a height of 10 feet (rarely 12½) and is locally too dense to walk through easily. There is generally some Iva even in the densest Baccharis stands. Solidago sempervirens, Phragmites communis and Spartina (large sp. with panicle) are occasional. This ridge is essentially continuous but in places has been washed over and almost or quite obliterated by storm waves, this especially ~~[illegible]~~ at head of small bays or coves.

Prunus sp. is local on this ridge but ~~[illegible]~~ on a spot of local higher ground (a yellow soil) rather than really a part of the sand ridge.

1957 Maryland

Back of the ridge on the slope, is pure Iva scrub down to average high tide level. Then there is salt marsh - stands of two or three grasses - essentially pure stands, with occasional patches of Iva. This marsh is of ranging width, up to 200 m. wide to a tidal inlet, that runs roughly parallel to the beach. Along the shore of this, Iva scrub is fairly general.

The marsh has been mostly burned. New shoots are just appearing.

The marsh is level, just barely covered by high tide. Along the creek the ground is a very slight bit higher and here is where the Iva scrub (with a very slight admixture of Baccharis) is found. The Iva scrub becomes more general headward

along the creek. Panicum virgatum also appears, headward and in places is common even pure patches occur. The creek ramifies headward into tidal channels and ponds, and between these the ground is hummocky and Baccharis is general growing on (or giving rise to?) the hummocks. Between the hummocks are channels with deep gray sticky mud in them.

Up a mile or so from the mouth of the creek are small patches of Typha, associated with Panicum virgatum.

These marshes are deliberately burned by the residents during the winter to reduce summer fire hazard.

Saw one black vulture, several crows and several gulls (herring?). Several vultures, the black, others too far away to be sure. Purple grackles, starlings, one meadowlark.

In slightly higher ground are thickets and thin woods of Liquidambar and Robinia, with patches here and there of Populus grandidentata (?). In open places Juniperus tends to colonize, and there are areas with thickly scattered trees 15-20' tall, mostly of the columnar form.

The entire water's edge seems to be receding, cut away by bay waves. People with cottages have put up retaining walls. One group of lots were not thus protected and were almost entirely eliminated.

Mytilus sp. lives in the turf at the edge of the water, the hinge end inserted in the mud.

Land above the tide level, except the recently deposited beach ridge, tends to have deciduous thickets and woods. Some junipers and a very occasional pine.

May 15-24 - Sleepy Hollow, 1 mi. S. of Falls Church

Cicadas (17 year locusts) emerging throughout this period. In Brown's yard, which is a little more open, they started a couple of days earlier than in more densely wooded area. The nymphs climb up a few feet into shrubs or on fence, then stop, split along top of thorax, and imagos struggle out, leaving the cast skins clinging to shrubs. They rest here while their wings are expanding and hardening. Then they climb & fly up into the trees, where they commence to make their characteristic low buzzing-whistling sound. Seems to be only the ♂♂ that sing. This noise differs greatly from the shrill sound of other cicadas, being much lower and softer, infinitely less volume.

Label typed

Mating was observed between May 22 and 24.

The population in the ground in the woods is quite enormous. Holes where larvae have emerged range as high as 12 in a square foot. They dig their way out even in firmly packed ground as in paths, etc.

May 24 - Bull Run, 3/4 mi. s. of ~~Rt~~ Rt. 50, 4 mi w.s.w. of Centreville (see pp 38-41, 48-53)

Small flood plain. a terrace along run is thickly covered by herbs and low shrubs. The shale slope is thinly covered by Paronychia and various larger herbs.

Small flood terraces along run, stiff clay soil

34668 Scutellaria
local under trees

69 Carex
local under trees

70 Osmorhiza longistylis (Torr.) DC.
rare, under trees

Under a flagstone some were able to burrow horizontally far enough to emerge. Others did not make it and died in their burrows.

65 m In the woods on the flat the ground cover is rather thin, roughly thin in proportion to the density of the woods. Legumes (Desmodium, Lespedeza, etc.) are prominent in this, but not mature yet.

flowers blue-lavender

small tufts, culms spreading, almost procumbent. roots fleshy, faintly anise-scented when broken

1953 Virginia 71-72 with VDT.

Fairfax Co.

34	71	Galium circaezans Michx. under trees	flowers greenish.
12	72	Viola canadensis L. under trees	flowers white.
13	73	Galium obtusum Bigel. open grassy area	flowers white, 4-parted. roots orange.
11	74	Oxalis filipes Small open place with some small trees.	erect, flowers yellow.
11	75	Stellaria pubera under trees	petals white.
12	76	Poa compressa open grassy place	bluish green, culms erect, flattened. forming small open colonies by buried rhizomes.
11	77	Carex open grassy place, uncommon	
12	78	Potentilla canadensis L. common in open places	prostrate, ~~flowers~~ petal yellow, ~~petals~~ very slightly emarginate.
11	79	Plantago virginica occasional in open places	erect.
14	80	Carpinus caroliniana common, scattered in open and under trees	small tree, 5 m. tall.
13	81	common in open and under trees	spikes pendent. culms erect, single or slightly caespitose.
13	82	common in open	culms erect, solitary.
14	83	Lizyrinchium angustifolium Mill. common in open and under trees	roots yellow; flowers blue - ~~lavender~~ violet.
11	84	Myosotis verna Nutt. rare in open	erect

not checked
Labels typed

1953 Virginia

Fairfax Co.

2nd Checked
Labels typed

34685 Hedyotis caerulea (L.)
~~rare~~ occasional ~~on fls~~ in open

1 2 86 Carex
rare in open

1 87 Graphalium purpureum
rare in open

1 88 Krigia virginica (L.) Willd.
occasional in open

1 4 89 Carex
common

1 4 90 Carex
occasional

1 4 91 Carex
common

1 4 92 Carex
common

1 2 93 Galium aparine L.
common generally

1 4 94 Allium canadense L.
common in open

1 95 ~~Orobanche~~ Coraphalis aurea (L.) Wallr.
rare undertree, ~~of~~ this
one only one seen, at base
of Cornus florida but
perhaps on root of something else.

1 96 Krigia dandelion (L.) Nutt.
large colony undertrees.

1 4 97 Veronica peregrina
common in open

1 98 Oxalis violacea
very rare

f Convex lavender

blue-green, culms
strongly spreading,
procumbent.
erect

erect, pale green

slightly caespitose, culms
arching.
culms spreading

caespitose, culms
spreading
culms arching

procumbent

leaves flat, flowers
pinkish; plant with
rank odor.

plant rather glaucous;
tuberiferous, leaf-cutting
various.
erect, flowers blue.

flowers pink

Not checked
Labels typed

lower part of crumbly shale slope, soil thin.

34699 Euphorbia peplus L. — very common — light green.

700 Barbarea vulgaris — common — erect; flowers yellow, mostly past.

01 Asplenium platyneuron — occasional about bases of trees

02 Oxalis europaea Jord. — rare in open — flowers yellow.

03 Panicum — occasional in open — caespitose, erect.

04 Danthonia spicata — common in open — caespitose, culms erect

05 Parietaria pensylvanica Muhl. — local in open — erect, stems fleshy.

06 Tradescantia virginiana L. — occasional under trees

~~07 Silphium laciniatum L.~~

07 Taenidia integerrima (L.) Drude — common under trees — deep-rooted, leaves glaucous beneath.

Low shale cliffs

08 Woodsia obtusa (Spreng.) Torr. — occasional on brow of cliff

09 Arabis lyrata — occasional on brow of cliff — flowers white, nearly past.

10 Asclepias quadrifolia — occasional on brow of cliff on crumbly shale. — flowers pale pink

11 Myosotis — on crumbly shale at top of cliff, under pines

Now checked
Labels typed

1953 Virginia

34712 Silene caroliniana
1 on rocks, rare

3 13 Heuchera
on ledger, common

1 14 Saxifraga virginiensis Michx.
on wet ledges

~~5 Senecio~~

~~on~~
On flat wooded ground

2 15 Senecio
bare crumbly shale;
small colony.

1 16 Hedyotis caerulea
common along trail

2 17 Lobelia spicata var. scaposa McVa.
occasional in small
colonies

2 18 Oenothera
occasional in thin
open spots in woods

1 No V.of.I. 19 Liparis liliifolia (L.) Rich.
rare

May 24 - 1/4 mi south of
Rt. 50, east of Bull Run

2 20 Trifolium reflexum L.
rare along roadside

1 21 Clematis ochroleuca
in woods on ~~same~~ gentle
slope, some stone

flowers pink

tending to be branched at base;
anthers orange.
scapes very brittle.

60 m.

Spreading by filiform
rhizomes; flowers bright
deep yellow.
flowers lavender

flowers white.

flowers bright yellow.

flowers with petals
bronze-purple.

75 m

flowers rose-colored

plant erect.

1953 Maryland

Labels typed

June 7 – 3 mi. e. of Largo.

34722 Hedyotis purpurea var. purpurea
√2 Tall, rather open forest of oak, hickory and tulip, thin undergrowth and continuous ground layer

June 7 ~~Broo~~ head of Broad Creek, Anne Arundel Co.

Cicadas numerous, signs of their egg-laying activity in form of dead twigs hanging on trees abundant.

Driving along highway certain spots are passed where their sound is very strong, other places, apparently similar, where they are scarcely to be heard at all.

solitary or ~~stoloniferous~~ a few stems from base; flowers pale lavender.

Striking variation noted in Erigeron annuus ~~color~~ in leaf cutting, hairiness and robustness and degree of ramification. H is dominant in parts of abandoned field at O'Neill place, elsewhere √Vicia is dominant.

June 8 - Sleepy Hollow
1 mi. s. of Falls Church

34723 Acer rubrum L.
+5 common in swamp
+2 24 common along roadside, edges of swamps.
+2 25 rare along roadside edge of swamp
+2 26 common along roadside, edge of swamps

June 11 - Falls Church area - Cicadas still present but numbers definitely falling off. Dead individuals on ground very common.

Trees with dead twigs very unevenly distributed. Some trees showing dozens or even hundreds of dead hanging twigs, others none.

Apparently the animal cuts the woody parts of the stem but not entirely. The cutting takes place, curiously enough, not back of all the punctures wher

twigs from top of tree; leaves white beneath. small tufts; culms ascending; panicles pendent.
tufts, culms erect.

small loose tufts, culms ascending.

eggs have been laid, but leaving some on the living side of the break.

Driving south on Shirley Highway no damage to trees seen south of Occoquan Creek.

June 11. - Along drive in North Section of Park ailanthus and Robinia have come in to such an extent that they line the drive in places.

Crescent Rock has been walked over so much that the rocks are becoming polished, and few plants except Hedyotis canadensis have been able to persist. The latter, in dwarfed form, persists in crevices and protected places in the rock.

At Big Meadows the main meadow, east of the road in to the camp, is becoming conspicuously invaded by woody species. The places that, a year or two ago were grassy are now covered with a growth of young Robinia pseudo-acacia a foot or so tall, and a

very few feet apart. Low patches of Juniperus and bushes of Crataegus, etc. are common throughout. The lower area around the swamps is thick low woods, and the whole is losing the aspect of a Meadow.

The meadow below the ~~road~~ Skyline Drive is not showing much invasion yet.

not checked 1953 Virginia

Labels typed.

June 13 - ½ mi. s. of Polick Church

+ 34727 Verbascum blattaria L.
rare in weedy roadside patch

June 13 - Lebanon, estate of Dr. Paul Bartach, near Junston Hall
Fern glen established in wooded ravine.
Fifteen or more species of ferns, as well as many insectivorous plants and some orchids growing in semi-natural condition.
Two small sphagnum bogs, a stream with pools, sandstone and limestone walls, a slope with Ophioglossum vulgatum growing in a large colony.
The surrounding wood is full of Lonicera japonicum which would envelope the whole if vigilance were relaxed.

erect; flowers white. inflorescence viscid.

Bird feeding station attracts a great number of species.
Five pairs of wood-duck said to nest there, also 2 pairs of pileated woodpeckers.
458 acres in estate.
Colonial house.

Labels typed

June 14 – ~~Generally~~
mi. nw. of Williamsburg
1 mi. n. of Five Forks
in generally rather thin mixed woods, locally logged over, with thin crucaceous layer 0.5–1 m. high, thinner in thicker places in woods. ~~Low~~ rolling land, marshy places in lower spots and along streamlets.

34728 4 Selaginella apoda
common in acid swampy place with a little running water.

4 29 Helenium autumnale var. pumilum
very local, in small marshy place, now badly trampled by cattle.

1 30 Polystichum acrostichoides

2 31 Athyrium asplenioides
swampy forest.

3 32 Asimina triloba
in ~~marshy~~ swampy places along stream, with royal fern, sphagnum, etc.

20 m.

creeping but fertile branches ascending or erect.

scapes ascending, mostly past flowering; disk low, green, rays yellow.

rosettes

shrubs, sterile

1953 Virginia

Powhatan Swamp,

June 14, 4¾ mi. w. of Williamsburg

swamp, with area of bare mud with only Saururus, slightly higher ground with more vegetation, ferns, etc.

34733 Circaea quadrisulcata (Maxim.) small colony on ground just above swamp level

34 Fagus grandifolia very rare in swamp

June 14 — Powhatan Creek, 1 mi. above Jamestown

swampy area with mixed forest, undulating ground with marshy spots in low places

35 Woodwardia areolata local in wet spots

34 Rosa palustris along stream, edges of swamp woods and in Pontederia flats.

1-2 m. Acer rubrum, Ulmus, Quercus, Pinus, Taxodium —

Franct + Sav. erect, flowers white.

small tree

mixed forest, Pinus, Quercus, etc.

Pontederia and Rosa along stream.

rhizome horizontal, buried.

shrub 1-2 m. tall, flowers pink.

June 15 - Feeder Ditch, ~~[illegible]~~ running into Lake Drummond from canal on east side

To left, going in, is dense growth of Myrica and Arundinaria, with very few small trees.

To the right are many scattered Pinus taeda and Liquidambar at first, becoming shortly a thick forest with some admixture of other species.

1/2 mile or less in, on the left bank is a strip of young Pinus taeda, apparently in the fill from the ditch.

Banks lined with sapling Acer rubrum, Prunus serotina, Ulmus alata, Ilex spinosa, Liquidambar, Salix tangled with muscadine and other Vitis and Lonicera japonica, occasional Rosa palustris in full bloom. Pteridium locally.

Further in the pine strip becomes broader and more mixed with Liquid-

ambar and Salix nigra. After a bit, is replaced by the two latter, which then become more or less broken and open (both sides).

This forest or broken woods, on both sides is practically restricted to the ditch banks. Away from banks is Myrica - Arundinaria thicket up to 3 m. high, flooded at

Away from ditch are patches of woods, largely Pinus taeda.

In near lake is almost solid forest of Liquidambar, changing to Nyssa sp. and Acer sp. some Salix nigra Persea occasional.

Soil piled up along ditch is light gray, with occasional deposits of oyster shells.

1953 Virginia

June 15 - Lake Drummond roughly circular lake. Water dark brown, with peculiar but pleasant taste. The whole lake is surrounded by forest and is small enough so that it impresses one as a lake in the middle of deep woods. Much of the sky-line is very even as though there had been little disturbance. One stretch, on the west or southwest side is very ragged, with sparse trees above a dense lower story. This is where there was a disastrous fire lasting about a year (acc. Wherry) occurred

The water is held in the lake by the dam at the spillway and fed down the ditch as needed to maintain the water level needed in the main Inland Waterway Canal.

At this time the water is so high that some is being let go to keep the lake from overflowing into surrounding country and flooding agricultural lands. Last summer the lake went almost dry.

Labels typed

June 15 - vicinity of Spillway on Feeder Ditch, S. of Lake Drummond Dismal Swamp
Mixed swamp forest of Acer rubrum, Nyssa aquatica, Liriodendron Liquidambar Taxodium
growing on deep moist spongy peat, ~~open~~ rather open beneath, sparse Arundinaria, occasional tangles of Smilax, Berchemia, etc. Dekumaria barbara climbing tree trunks, in openings Rubus and Vitis. Ferns abundant on peat and on decaying stumps and logs.

Arundinaria very scarce and local

Ferns seen, in order of abundance:
Woodwardia areolata
Dryopteris celsa
D. austriaca v. intermedia
D. " " spinulosa
×D. separabilis
Osmunda cinnamomea
O. regalis
Woodwardia virginica
Asplenium platyneuron
Athyrium asplenioides
v. bacculum-rubrum

×34737 Dryopteris × separabilis — fronds ascending

×38 Dryopteris austriacus v. spinulosa occasional

×39 Dryopteris austriacus v. intermedia occasional

×40 Dryopteris celsa (appx. D. clintoniana) occasional — fronds strongly ascending

×41 Dryopteris celsa common — fronds strongly ascending

×42 Saururus cernuus locally common — herb up to 1 m. tall, flowers white.

nos. checked

Labels typed

1953 Virginia

Norfolk Co.

June 15 - West side of south. Lake Drummond, Dismal swamp - Tall forest, 30 m. or more, largely Liriodendron and Acer rubrum, with Persea borbonia, Ilex opaca, Ilex cassine in understory, a discontinuous layer of Pieris nitida, 1 m. or less deep, with Dryopteris austriaca v. intermedia and Osmunda cinnamomea common on ground, O. regalis and Woodwardia areolata very rare. Vines of Smilax sp. Decumaria barbara, Vitis rotundifolia, Berchemia scandens, Parthenocissus quinquefolia very abundant, obstructing walking somewhat. Deep peat soil.

34743 Pieris nitida
15 abundant on floor of forest

D1 44 Ilex
occasional

15 45 Pieris nitida
abundant on floor of forest

1 46 Liriodendron tulipifera
codominant tree in forest

2 47 Decumaria barbara
climbing on tree in forest

low arching, ~~scrambling~~ irregular shrub.

shrub 3 m. tall, fruit immature

low shrub, 1 m. tall

tree 20 m. tall

main stems closely clinging to tree trunk

neg. checked

1957 Virginia

Labels typed

June 15 — South side of Lake Drummond. Dismal Swamp

— Mixed forest, principally acer rubrum, Persea borbonia and Pinus taeda. with thick layer of needles and humus. Ilex opaca, I. cassine, and small Persea in second story, very sparse. Clethra, Pieris, Leucothoe axillaris, etc. in shrub layer. Ferns: Woodwardia areolata, Dryopteris austriaca v. intermedia, Osmunda cinnamomea, Pteridium aquilinum (very local on pine needle piles), Dryopteris celsa (very rare). Vines -

34748 Pteridium aquilinum
½ very local on deep pine needles

1, 49 Ilex glabra
one plant seen

.1 50 Itea virginica
one plant seen

4 51 Leucothoe axillaris
occasional

3 52 Taxodium distichum
a few trees in the water near edge of lake

4 53 Chamaecyparis thyoides
scattered near lake margin

Chamaecyparis is common at edge of lake, but doesn't form dense groves. A few Taxodium distichum. very small, out in the lake

shrub 1 m. tall, leaves appearing distichous
slender sparsely branched shrub 1.5 m. tall.
shrub 1 m tall.

~~tree~~ slender tree 4 m. tall.

1953 Virginia

Norfolk Co.

Labels typed

June 15 Vicinity of Spillway south side of ~~Virginia~~ between Spillway and Lake Drummond ~~Dismal Swamp~~ has evidently been burned over not too long ago. Tangled thickets of Rubus and Pteridium and tall Impatiens biflora in openings between patches of trees

34754 Berchemia scandens
common, climbing into trees

saw a deer at edge of ditch between spillway and lake.

springy vine, stems dark dull green, leaves somewhat glaucous beneath; fruit immature. fronds erect.

+2 55 ~~Asplenium~~ Polypodium Platyneuron v. bacculum-rubrum
common locally on ditch embankment

+4 56 Vitis rotundifolia L.
abundant on ditch embankment climbing over bushes and trees

extensive woody vine.

+2 57 Callicarpa americana L.
occasional on ditch bank

+2 58 Smilax glauca
occasional on ditch embankment

shrub 1 m. tall, caespitose, buds pinkish. extensive woody vine; leaves very glaucous beneath.

label typed

June 20 – Bull Run, 3/4 mi. s. of Rt. 50
crumbly shale slopes on east side of run

34759 Baptisia tinctoria
in woods at top of slope

60 Chimaphila maculata
in thin woods, common

61 Rhus toxicodendron var. radicans
common, at top of shale cliffs, in open

62 Ostrya virginica
on low cliffs

63
on ledges of low shale cliffs,

64
on bare soil, in open

65
on bare soil, rather open

66
on mossy bank, rather open.

(2) 34759a Penstemon in open, top of

67 Rosa carolina
open slope, common.

68 Hedyotis purpurea var. longifolia
common on open slope

69 Clematis ochroleuca
rare in thin woods

70 Anemone
rare in woods, lower slopes

spreading herb,
– flowers lemon yellow
– leaves dark dull green with light markings,
flowers white, fragrant,
– anthers dull pinkish.
– creeping shrub,
leaves bright green,
– fruit green.
tree 6 m. tall, fruit pale green, pendent.

dense shade.

shrub up to 0.7 m. tall,
– flowers bright rose pink.
loose tufts; flowers
– lavender.
erect

erect,

not checked
Labels typed 1953 Virginia

Fairfax Co.

June 20 same
rich wooded bottom
land on flood terrace,
east side of run.

34771 ~~Galactia~~ Hedyotis purpurea var. pumila in woods — branched from base, flowers pale lavender.
½2 occasional at foot of slope
½1 72 Scutellaria — flowers violet and lavender
rare in thin woods. — erect; flowers white.
½3 73 Cryptotaenia canadensis
common in edges of
woods ~~along~~ around clearing.
½6 74 acer negundo — tree 10 m. tall,
woods along stream — racemes pendent.
½3 75 Sanicula — erect
common in woods

in muddy margin
of stream on flat bar.
½7 76 Justicia americana — erect, flowers lavender
common, forming — marked with deep
extensive patches — maroon purple.
½3 77 Sagittaria — flowers white.
common

lower slopes in woods,
shale exposures
½3 78 Galium circaezans — stems ascending,
common
½1 79 Geum canadense Jacq. — flowers white
rare, in wet rock ledge

no checks

Labels tipped

June 20 rains
low rich woods on
gentle slopes.

34780 Galium tinctorium
+3 common

+1 81 Asarum canadense
local

+3 82 Impatiens
common

June 20 - Sleepy Hollow

Cicadas are apparently
finished. Heard none
today.

flowers white, 4-parted.

shrubs creeping on
surface of ground
under mat of dead leaves,
flower grayish-white,
maroon within.
erect, stems fleshy,
flowers orange

Labels typed

June 23 - vicinity of head of Broad Creek, South River somewhat dissected coastal plain sediments.

34783 Quercus phellos x marilandica ?
single tree in deep ravine in woods

2 m. tree 7 m. tall, two trunks 1 dM. thick, no acorns. Leaves have texture of those of Q. phellos and shape intermediate between those of Q. phellos and Q. marilandica. Inner bark pinkish, no suggestion of yellow.

1 m.

84 Dryopteris cristata (L.) Gray
moist wooded ravine bottom

85 Fagus grandifolia
edge of thick mixed deciduous woods on rather level to rolling ground.

tree 15 m. tall, well-formed, bark gray; leaves unusually small for region.

June 28 - Hemlock Springs Overlook

Wet bank above road has several species of Carex that should be collected. By culvert, above road is a colony of Equisetum laricula (large sp.) around parking lot.

no checklist
Tabulated
✓ typed

July 4 - Deale Beach, Chesapeake Bay

Low sand ridge backed by a broad tidal meadow.

The ridge is covered by Iva frutescens, varied locally by a large Spartina, Phragmites, etc. and, esp. on back side by a small Spartina (S. patens) and Cyperus ( ).

In front of the ridge is a shelf of a heavy turf of Spartina (2 sp.), Elaeocharis, Scirpus (3 sp.), being undercut by water of bay.

The meadow is dominated by Spartina (34788 patens) mixed somewhat with Scirpus (robustus), Juncus ( ) and small plants of Iva.

34786 Elaeocharis
✓ 5 common, forming part of sod at edge of bay, just below high tide level.

✓ 5 87 Cyperus
local, forming patches on inner side of low sand ridge

✓ 8 88 Spartina patens (Ait.) Muhl.
dominant in meadow and on inner side of sand ridge

A pair of Glossy Ibis were in the Iva thickets. Red-winged Blackbird common, one nest seen, about 5 dm. above ground in meadow in a small clump of Iva. 3 eggs, pale blue with black irregular, somewhat worm-like markings. A few swallows seen, two unidentified ducks, one small sparrow (in the marsh).
English sparrows occasional.

erect, tecta.

tuberiferous, not especially caespitose.

rhizomes forming a dense sod.

1953 Maryland.

3478; Eleocharis
4 in ~~sod~~ at high tide
level, edge of bay

3 90 Juncus
occasional in meadow,
in dense growth of Spartina

5 91 Juncus robustus Pursh
scattered very commonly
in meadow and
around its edges

5 92 Fimbristylis castanea (Michx.) Vahl
occasional in meadow

local patches of
isolated culms.

isolated culms, erect
from prostrate buried
rhizome.

small tufts, culms
somewhat spreading.

VI 1953 Virginia
July 5 - Boggy Hollow 1½ mi.
s.e. Falls Church

1 93 Habenaria lacera (Michx.) Lodd.
edge of marshy place
in very weedy pasture

Fairfax Co

erect, flowers pale
green.

July 8 - 9 mi. s.e. of Leesburg on Leesburg Pike, just s.e. of Broad Run

Wood of Pinus virginiana 20-25 m. tall, crowns rather small, making a thin canopy.

Marked second story 5-10 m. tall principally Cornus florida, some Acer rubrum.

Floor completely invaded by Lonicera japonica, knee-deep in places, bare in a very few spots. Scattered shrubs of Symphoricarpos orbiculatus, a few bushes of Viburnum prunifolium. Some Parthenocissus mixed with the Lonicera. A few miscellaneous deciduous tree seedlings. A few herbs, but none of the characteristic associates of Pinus virginiana. Some signs of grazing, no obvious signs of fire.

Places with no Lonicera near edge of woods have Danthonia, some Hedyotis purpurea var. longifolia.

34794 Hedyotis purpurea var. longifolia
3 occasional in grassy spot near edge of pine woods

95 Nyssa sylvatica
one tree at edge of pine woods.

96 Quercus
~~small bush~~ edge of pine woods

single stems or slightly caespitose; f. corolla pale lavender.

small tree, 10 m. tall; fruit immature.

small sterile bush.

labels typed ✓

July 11 - 1½ mi. s. of Shadyside old field of gray hard silty soil, scattered bushes and grass.

x 34797 Verbena hastata L. rare among bushes erect, flowers bright purple.

x 98 Sabbatia angularis (L.) Pursh. local along road erect, pale green flowers bright pink

July 11 - ½ mi. s. of Lanes Beach, north east of Shadyside.

Oak forest, about 25 m. tall, trees mostly 1-2 dm. thick, some up to 3 or 4 dm. forming a fairly good canopy. Dominants - in order of abundance - Quercus falcata, Q. alba, Q. primus - with a few Liquidambar, Acer rubrum, and very few Pinus virginiana, some of these quite large.

An open second story 3-5 or more m. tall, mainly Ilex opaca, a few small Nyssa silvatica, Prunus serotina, very few Diospyros (no mature trees of these 3 seen) besides saplings of other trees. Very few Vaccinium corymbosum + Rhododendron (azalea) ?

Ground layer sparse - Vaccinium vacillans, Gaylussacia baccata, occasional Smilax glauca and S. rotundifolia (small), and numerous tree seedlings

Occasional moss cushions up to 3 dm. across of Polytrichum & Leucobryum.

Much bare ground covered by a few cm. of oak-leaf duff. Very few herbs + ors.

Borders abruptly on salt marsh (pure Scirpus americanus) at border Smilax more abundant, with Rhus toxicodendron, Baccharis, Myrica etc.

July 13 - Deale Beach

The entire area from Deale north at least to further than Shadyside has a terrace which appears to be about 1-2 m. above high tide level, very flat, of a gray silt which is hard when dry. This is up to several miles wide, backed by an eroded escarpment ~~to~~ fronting the general level of the coastal plain.

This 1-2 m. terrace is generally wooded where not cultivated. Most of the woods are ragged uneven second growth, largely Liquidambar, Pinus and Robinia, with Prunus, Diospyros and oaks. Locally, as n.e. of Shadyside (see p. 112) there is an oak forest which may more nearly represent what was here prior to man's activities.

The outer edge of this terrace is deeply lobed and between the lobes are areas of salt marsh, inlets, and sand ridges, the latter usually

on the outer borders of salt marsh areas or meadows, vegetated with a sod of Spartina patens with admixture of Scirpus robustus, Juncus sp. Iva frutescens, Typha, Panicum virgatum, etc.

The sand ridges have a mosaic of Iva frutescens, Baccharis, Phragmites which encroaches on the marsh, Spartina (large sp.), small shrubs of Prunus serotina, etc. Older ridges have young growth of Liquidambar, Prunus, Nyssa silvatica, etc. up to 15 m. tall. These shade into patches of slightly higher ground with larger and more complex woody vegetation and it is hard to tell where the constructed sand ridges end and the terrace begins.

The outer edge of the sand ridges is fringed with a dense sod of Spartina (tall sp.) with tangled rhizomes embedded in silt. Along the

entire part of the front of this examined the water is obviously cutting this away quite rapidly. It is undercut with bare rhizomes exposed, and frequently slumping down in large chunks. The water just outside this varies from 0.5 to 1 m. deep at high tide, and chunks of sod are littered over the bottom in places ~~for~~ several out from the shore. Beaches are few and very small. In no place was an actual constructed coast seen.

Out from this the bottom is silt, with some embedded shells. It has slight undulations but gradually slopes from 0.5 m. deep along the shore to 2 m. between 1/4 and 1/2 (nearer to 1/2 generally) mi. out

A possible interpretation of this terrace is that it is similar to what would ~~or~~ be exposed by a fall of 2-3 m. in sea level in the area now covered by shallow (0.5-2 m.) water.

The silt on the bottom at present is about like the material comprising the terrace. The topography, with its very gradual slope and very slight relief is much like the present bottom.

The amount of erosion that would logically have taken place in the last 5000± years, since the "post-glacial high" sea-level would have removed the shells in the surface layers, even if they were not dissolved out. If the terrace were a cut surface there would be no deeper shell beds, at least of recent age.

Labels typed July 14

July 14 Deale Beach, Chesapeake Bay — 0.5 m.
open place on low sand ridge between bay and salt marsh.

34799 Cyperus esculentus L. — spreading by deeply buried fine rhizomes, tuberiferous.
4 local colonies in loose sand

34800 Cakile edentula (Bigel.) Hook. — erect, leaves fleshy; flowers with yellow sepals and white petals
4 local in loose sand

01 Mentha crispa L. — 1.5 m. erect from prostate slightly buried rhizome; strongly aromatic, spearmint odor; flowers lavender, anthers red-brown.
local along fence-row, possibly planted and persisting.

July 14 - ½ mi. w. of Deale Beach, Chesapeake Bay — 1 mi. s. of Churchton
in woods of Quercus palustris and Acer rubrum on low, poorly drained silty soil.

4 02 Dryopteris noveboracensis f. fragrans (Peck) Brunk. — 2 m. fronds light green, ascending, fragrant, rhizome prostrate, slightly buried.
colony of 100 or more plants

03 Dryopteris thelypteris var. pubescens (Lawson) Nakai — fronds ascending to erect, all sterile, light green; rhizome prostrate, ~~slightly~~ superficial under dead leaves.
colony of 100 or more plants

Closed woods of rather small trees about 20 m. tall, up to 2, rarely 3, dm. dbh. about ⅔ Quercus palustris, ⅓ Acer rubrum, with a few Liquidambar, Quercus velutina, Q. alba, Q. rubra (?), and a very few Nyssa silvatica on

poorly drained heavy gray silt soil.

Generally a sparse uneven story of tree seedlings up to 1.5 m. tall, mostly acer rubrum, some Nyssa, Quercus, etc. between them in spots where the forest is thinner is a loose tangled layer of Campsis radicans about 0.5 - 0.7 m. tall, (not in flower, though in open and at edge of woods it is flowering abundantly), in denser part of woods this replaced by a sparse layer 0.5 - 1 m. tall of Smilax rotundifolia and Vaccinium corymbosum, with small tree seedling

Some spots completely bare of any herb layer, others with thin sterile grass.

July 14 - 1 mi. n. of Churchton

Forest 20-25 m. tall, trees 1-3 dm. thick, canopy essentially complete. — mixed oaks - Quercus palustris, Q. phellos, Q. falcata, some Acer rubrum and Liquidambar

locally some Q. alba, a very few Q. prinus and Q. velutina. Composition in all layers varies locally.

Under story sparse and uneven, of tree seedlings of varying heights, locally much tangled with Smilax, a little Campsis.

Ground layer of grass but very uneven, large patches of bare ground, locally a little Sphagnum and Carex colonies of several kinds, occasional moss cushions.

Locally a few Quercus alba and Quercus prinus saplings, many Nyssa saplings, 1-5 m. tall.

Soil gray, silty, poorly drained, covered by thin oak-leaf duff.

July 13 - 1 mi. n. and 1 mi. w. of Churchton

Small area of forest of large trees, about 30 m. tall, mostly 3-6 dm. dbh. widely spaced, canopy somewhat broken. — principally Quercus prinus

and Q. falcata, some Liquidambar, a few Nyssa, Acer rubrum and Liriodendron.

Understory to 10 m. of Ulmus, Fraxinus, Nyssa, Acer rubrum, very much tangled with Lonicera japonica and Rhus toxicodendron.

The two latter forming a dense ground layer, also, varied locally with areas of pure Impatiens, a more locally Boehmeria, a grass, a Onoclea, one large area of Glechoma.

Some large Vitis lianas climbing into trees.

Soil a gray silt, locally poorly drained.

This area of a few acres surrounded by logged out decadent woods.

July 14 - general vicinity of Beale Beach and Churchton.

Small cultivated patches, some old fields, second growth thickets and woods, with a few areas of tall woods as described.

Original vegetation probably a varying mixture of Quercus species, probably with some Nyssa, Liquidambar, and Acer rubrum, small numbers of other trees.

Logging as well as clearing and later abandonment seems to favor especially the Liquidambar, but most of the oaks are well represented in the young growth, as well as ~~Acer~~ Acer.

There is much Rhus, etc. that disappears when the forest canopy closes.

not checked
Pedalo typed

July 15 - Deale Beach
Chesapeake Bay
edge of salt marsh

34804 Elymus virginicus L. var. virginicus (L.) somewhat caespitose, erect.
5 local
4 05 Cyperus ovularis var. sphaericus, Boeckl. somewhat caespitose.
rare, in hard ground
4 06 Scirpus americanus Pers. culms erect from deeply buried rhizome, sharply
dominant in part of triangular.
salt marsh immediately
bordering on bay.

July 17 - same
~~woodland~~ side of low
sand ridge toward
bay, edge of dense
Spartina sod.

July 14 - ~~Fair~~ Cliffs south of Fairhaven

Cliffs of gray diatomite (?) up to ~~30~~ 10-15 m. tall, straight up from water being very slowly eaten away by the water.

Unconformably, on top of this is 10-15 m. of unconsolidated sediment of a gray-brown color with oyster shells in it. and clay, quartz pebbles in lenses

In the diatomite which is so soft that it can be crumbled or cut easily are numerous fossils, principally small bivalves of several kinds, not well preserved, principally as casts and molds, fish scales and bits of lignite.

In the lower layer of this, about 1 m. thick, at water level, are numerous fossils of a black color - casts from a tower-like gasteropod, shark teeth, bivalves, fish vertebrae, jaw fragments, limpets, etc. which most likely are not of same age as diatomite, as in the same bed are numerous flint-like black pebbles, etc. all this black material probably

dates from an earlier bed that contributed debris to the diatomic sediments.

1953 Maryland

July 15 Cliffs south of Fairhaven

34807 Elymus virginicus var. jejunus (Ramaley) Bush
wet clearing in woods at top of cliffs

08 Phragmites communis
large patch at top of sandy beach in mouth of broad ravine cutting cliffs.

erect, ~~slightly~~ ~~scabrous~~ caespitose

rhizomes complicated, branched many ways, older ones slightly creeping deeply buried, forming a dense sod; culms up to 2.5 – 3 m. tall, inflorescence dull purple.

1953 Maryland

labels typed

July 17 – Deale Beach
~~bay~~ward base of low sand ridge, edge of dense strip of Spartina sod.

34809 Spartina cynosuroides (L.) Roth
3 ~~dense clumps~~, common locally, forming clumps and small brakes.

1 10 Spartina alterniflora var. glabra (Muhl.) Fern.
local in sod strip

3 11 Scirpus americanus
common locally in sandy part of sod.

2 12 Scirpus americanus
occasional in edge of sand
(perhaps an extreme of 34811)

dense clump, ~~2~~
canes 2 m. tall.

erect

culms solitary from deeply buried prostrate rhizomes, these soft, spongy; green.
culms bent in fifths.

~~culms solitary from deeply buried prostrate rhizomes, these soft and spongy; sides of culms concave, light green.~~

1953 Virginia

July 18 - Elizabeth Furnace, west side of Passage Creek, Shenandoah Co.

Shale slopes - exposures of thinly bedded Devonian shale, dipping almost vertically, soft and crumbly, with deposits of broken up shale debris, fragments very fine, in depressions, on ledges, etc. No conspicuous large talus slopes.

34813 Oenothera argillicola Mack. common on roadside shale cliffs and talus.

34814a Hedyotis (as in 34811)

July 18 - Edinburg Gap Shenandoah Co. Shale slopes with sparse small pine woods

34814 Eriogonum alleni Wats. scattered in openings ~~in~~ on slopes of crumbly shale

July 18 - Boyer's Furnace, Shen. Co.

15 Physalis rare about old furnace

Phlox subulata is common. Draba ramosissima also. Trifolium virginicum occasional. Oenothera argillicola common on lower cliffs and talus along road.

Most plants not in recognizable condition because of extreme dry spell. or not yet out.

These shale barrens are definitely shale outcrops rather than shale talus

- branching at base, branches not branched; petals yellow. (In Fernald's key it runs to villosa, because of hirsute ovaries.

Eriogonum scattered in openings in pine woods or slope, but on road cut and talus at base it is abundant.

- loosely branched root crowns, making small clumps.

very viscid; flowers pale yellow with purple-brown center.

July 18 – Caroline Furnace, Passage Creek, 2 mis. n.e. of Moreland Gap. Shenandoah Co.
Brushy patches in old field

34816 Gonolobus — twiner, several m. long.
+2 climbing in thicket
+7 17 Rhamnus — forming small thickets
on rocky outcrops and stone heaps.

July 13 – just east of Moreland gap. Page Co.
small bog

3 N 18 ~~Coeloglossum ciliatum~~ Habenaria ciliaris (L.) R.Br. — erect, flowers bright orange.
occasional

2 N 19 Habenaria clavellata (Michx.) Spr. — erect, flowers greenish white.
occasional to common

8 N 20 Lycopodium inundatum v. bigelovii Tuckr. — prostrate with erect branches.
common in sphagnum

1, 24 Panicum
occasional at edges of bog

1, 25 Panicum
occasional at edges of bog

11 27 Dryopteris thelypteris (L.) Gray var. pubescens — rhizome prostrate
common in wet edges of bog

1953 Virginia

Massanutten Mts.

July 18 - Powell's Fort Camp, Little Passage Creek, Little Fort Valley, Shenandoah Co. boggy swamp in valley bottom.

34824 Fraxinus nigra Marsh. occasional — small sterile tree 6 m. tall, (others seen up to 10 m.)

25 Pantsvetteria caroliniensis (Walt.) Vail common — stems ascending, flowers white.

26 Drosera rotundifolia L. local on mossy boulder in bog — forming a mat, in bud only.

27 Campanula aparinoides Pursh common — flowers white

Aug. 5 - Sleepy Hollow, 1 mi. S. of Falls Church, Fairfax Co.

28 Sambucus canadensis in second growth deciduous woods. — sprouts from buried rhizomes, sterile; specimen to show under-ground system.

Aug. 12 Elizabeth Furnace, Fort Valley
Talus at foot of shale cliffs along road covered with Oenothera argyllicola. Same colony as #34913. Flowers now larger (width = 9-10 lines on this page) - ovaries and outside of calyx markedly villous. Flowers distinctly zygomorphic. The stamens all sharply bent in one direction from point of attachment at base of corolla, then gradually upcurved so that they spread spoon-wise over one half of the flower.

Aug. 13 - same
White Pine Plantation
Strip of young white pines about 50 m. wide
Not more than ~~#~~ 2-3 cm. of needles on ground.
Seedlings and saplings of Ulmus, Fraxinus and Cornus on ground.
most common plants
a Rubus (dewberry)
c Parthenocissus quinquefolia
o Chimaphila maculata

a little shorter than petals (petals 3 cm. l., filaments 2 cm. anthers paralled with filament 9-10 mm. l. attached just below center, pistil 3 cm. l., the branches somewhat thickened 4.5 mm. l.

When observed just before sunset very few flowers open, just at dusk a beautiful display open.
(Has been descr. as var. - castanea by Davis)

c Desmodium nudiflorum
o Galium triflorum
o Gnaphalium purpureum
lg Antennaria plantaginea
lg Hepeta hederacea
o Veronica officinalis

Back of this was a patch of Pinus virginiana but several months ago this was cut for pulpwood. Scattered trees (seed trees?) were left 5-10 m. apart.

labels typed

scattered second story of common florida. seedlings of deciduous trees, esp. Cercis, Cornus, etc. coming up, with many weeds.

Aug. 13 - Fort Valley about 1 mi. above Organ Gap Camp Road.

Patch of Pinus virginiana woods - small trees 1-2 dm. ~~d~~ d.b.h., 10 m.± tall, 2-3 cm. of ~~te~~ needles on ground. Rolling to sloping ground. A few oak, Carya, and red maple seedlings.

c Lespedeza procumbens
lc Chimaphila maculata
la Rubus
la Asplenium platyneuron

34829 galium pilosum
1 rare
1 30 Solidago pubenula
locally common
1 31 Lespedeza
common

4 32 Cladonia
locally abundant on ground
11 33 Asplenium platyneuron
locally abundant, especially on slopes.

Humus 3-5 cm. deep left in place, much of it scraped off. Hypericum gentianoides common in bare spots.

la Centaurea maculosa
lc Solidago pubenula
o Veronica officinalis
o Hedyotis purpurea v. longifolia
o Parthenocissus quinquefolia
sr. Galium ~~taiflorum~~ pilosum
u Lycopodium complanatum
go Antennaria neglecta
lc Deschampsia flexuosa
o Rhus toxicodendron
o Euphorbia corollata
o Polytrichum commune
la Cladonia
o Anacolia?
r Monotropa hypopitys
ascending

erect, flowers bright yellow.
prostrate from deep root, flower, rose pink with red in standard.
forming loose rounded greenish gray cushions

sterile fronds prostrate, fertile erect.

1953 Virginia

34834 Monotropa hypopitys
rare

35 Hedyotis purpurea v. longifolia
occasional

36 same
occasional

37 Leucorchis
rare

Aug. 13 - Fort Valley, just above ~~District~~ Detrick
Small patch of Pinus virginiana, somewhat grazed, ~~[illegible]~~ about 10 m. tall, beside it a patch ½ m. tall, and next to this, a small stand about 1-2 m. tall.
In the tall patch are seedling and sapling oaks, Sassafras, Carya, Acer rubrum, Cornus, a little Smilax.
The plants in the ground layer are:

34838 Hedyotis purpurea v. longifolia
abundant on dry crumbly shale slope

39 Kuhnia eupatorioides L.
common on dry crumbly shale slope

last year's plants.

Prostrial, forming small round mats 1-1.5 dm. across

Prostrial, forming pale green cushions.

c. Chimaphila maculata
r. Lespedeza procumbens
o Hedyotis purpurea v. longifolia
o. Galium pilosum
o. Rosa carolina
o Danthonia spicata
o Antennaria plantaginea
u Veronica officinalis
u Rhus toxicodendron

In the two younger stands of these plants the Lespedeza, Hedyotis, and Danthonia are common, along with many weedy plants.
There are on and near the top of a hill that ends in a steep crumbly shale slope that is open.
caespitose, flowers lavender to white, heterostylous.

deep-rooted, branching at base; flowers cream-white.

1953 Virginia

34840 Lespedeza
√1 rare on dry crumbly shaly slope
1 41 Oenothera
rare on dry crumbly shale slope

- Aug. 13 - Fort Valley, near Joppa Road, along Passage Creek
Low cliffs cut in fossiliferous shale
- abundant Devonian brachiopods.

Low shale cliffs with ledges and steep slopes, with abundant ferns
a Asplenium trichomanes
c Woodsia
c-la Polypodium vulgare v. virginianum
r. Dryopteris marginata
c Asplenium platyneuron
la Asplenium rhizophyllum
la Deschampsia flexuosa
c Heuchera americana
o Hedyotis purpurea v. longifolia
lc Rumex acetosella

34842 moss
3 common on narrow ledges
√2 43 Asplenium rhizophyllum
locally abundant on low cliffs
√3 44 Asplenium trichomanes
abundant
√1 45 Woodsia obtusa (Spreng.) Torr.
common on small ledges

erect, flowers reddish purple.
- ascending, flowers yellow.

Escarpment with a slope above it - the slope wooded with low second-growth oak woods, ericaceous undergrowth - open border above escarpment with Vaccinium stamineum and Epigaea. Eroded.

c-a Cenila organoides
a Rhus toxicodendron
r. Spiraea betulaefolia
c Parthenocissus quinquefolia
lc Pt. Chionanthus virginicus

soft cushions

prostrate

[illegible] erect

no. checked

146 1953 Virginia

Label typed

Aug. 13 Fort Valley, near Oak Levels, w. of Passage Creek (opposite Kennedy's Peaks) Forest of Pinus virginiana 1-2 dm. thick (d.b.h.), about 15 m. tall, on slope of hill. Little undergrowth except occasional seedlings of oaks (c), Acer rubrum (c), Carya (o), Sassafras (o), Nyssa (r.), Fraxinus, Juniperus (o) americana (r.), Cornus florida (c) ground layer sparse, of

c Lespedeza procumbens
c Galium pilosum
c Chimaphila maculata
c Rubus
~~c Cassus flos~~
c Antennaria plantaginea
o Rosa carolina
o Crataegus cuneata
o-c Viola pedata
o Vaccinium stamineum
o Parthenocissus quinquefolia

3 4846
1

several bushes

Aug. 13 - Fort Valley

Sparse growth of Pinus virginiana 1-2 (-4) dm d.b.h. 8-10 m. tall, on ~~slope~~ slope

o Asclepias
o Danthonia spicata
gl Antennaria neglecta
o Vaccinium vacillans
o Asclepias stans
u Rhus toxicodendron
ul Pycnanthemum flexuosum
ul Pycnanthemum
sl Solidago pubescens
r Chimaphila umbellata
r Lonicera
o Potamogeton canadensis (c)
lc Anaxolia

shrub about 1 m. tall, diffusely branched.

of hill, very little undergrowth. Ground layer of:
la Antennaria plantaginea
a ~~a~~ Potamogeton canadensis
la Danthonia spicata

1953 Virginia

Label typed

l.a. Viola pedata
c Asclepias stans
c Lespedeza procumbens
l g Antennaria neglecta
l g Vaccinium vacillans
l g Gaylussacia baccata
o Juniperus virginiana
o Chimaphila maculata
o Quercus ilicifolia
(large old plants)

✓ 34947 Quercus ilicifolia
1 scattered in undergrowth

~~Aug 13~~
Aug. 13. - along Cedar Creek about half way between Marlboro and Oranda. Frederick Co.
Creek meanders, ~~accross~~ with cliffs first on one side, then other. flats on opposite side from cliffs. On flats rich bottom-land forest much Platanus along creek.
On talus at base of limestone cliffs are scattered Thuja occidentalis some Tilia.

l a. Cladonia
u Rhus toxicodendron
u Galium pilosum
u Solidago pubens
u Crataegus cuneata
a seedlings of oaks
l a seedlings of Carya.

large old shrub 2-3 m. tall, several m. wide.

On flats 30-40 m above river is mixed second growth oak forest.

Labels typed ~~Aug~~ Aug. 13. - Elizabeth Furnace
Lower end of Fort Valley,
Massanutten Mts.
Talus at foot of road cut
cliffs in shale

74849 Commelina erecta
✓4 common

✓5 50 Oenothera argillicola var.
abundant

~~Aug~~ Aug.
~~Sept~~ 14 - 1 mi. S. of Staunton
on main highway

✓3 51 Euphorbia ~~corol~~ marginata
scattered on bare
places around weedy
waste place and on
roadsides

stems spreading to
ascending; flowers bright
purplish blue, lower petal
white, open in morning.
herbs up to 1 m. tall,
branched at base; petals
bright yellow, androecium
zygomorphic.

erect, bracts white.

Aug. 14 - south side of Cave Mt.
slope with rather open forest of large trees with tall straight trunks up to 6 dm. thick they mostly oaks either Quercus ~~rubra~~ palustris or Q. coccinea (could not be sure but from habitat probably Q. coccinea - lvs. broadest at second pair of lobes from tip) but large Q. prinus, Q. alba Q. velutina and Oxydendrum arborea also common, not as large as Q. coc.
Undergrowth is almost continuous Cornus florida, mostly 1-2 m. but scattered trees 5 m.
Young Vitis sp. common.
o Nyssa seedlings
u Carya seedlings
u Sassafras "
o Chestnut sprouts
la Vaccinium vacillans

Furnace in very good shape. walls have good growth of Parthenocissus, Vitis, & Pellaea atropurpurea.

Aug. 14 - Glenwood Furnace, Samuel Parker Memorial Forest, Arnold Valley.
A planting of Pinus taeda made in 1933.
Trees about 1.5 dm. dbh 15-20 m. tall, canopy mostly closed, dry needles 5-8 cm. thick on ground, undergrowth very sparse. A very thin second story 2-4 m. tall, in parts of forest, of thumb size Ailanthus altissima.
scattered shrubs:
cc Symphoricarpos orbiculatus
r Corylus sp. r. Cornus florida
o Viburnum prunifolium
u acuminata
ground cover
c Chimaphila maculata
o Rubus
c ~~Cb~~ Goodyera pubescens
c Liriodendron procumbens
cc Rhus toxicodendron
r. Asplenium platyneuron
o Parthenocissus quinquefolia
u Cassia nictitans
u Desmodium sp.
r Galium pilosum
cc Vitis seedlings
cc Oak seedlings
u Juniperus virginiana seedl.
u Sassafras seedlings

Labels typed Aug. 14 – North Creek, 3/4 mi. above Arcadia.

Flat canyon bottom with large boulders
Large Tsuga and Pinus strobus dominant in forest on valley floor, with some ulmus, Platanus a few Quercus alba, Fraxinus and Cornus florida. Substratum of deep humus completely filling spaces between the boulders, covered by a thin ground cover of ~~Mitch~~ Mitchella repens, with moss on boulder
o Asplenium platyneuron
o Dioscorea o Smilacina
o Chimaphila maculata
o Asarum virginicum
o Viburnum acerfolium seedlings
B a few tree seedlings.

J 34852 Mitella diphylla L.
abundant on rocks at foot of cliff
J 53 Goodyera repens v. ophioides Fern.
rare on rocks at foot of cliff
J 54 Polypodium vulgare var. virginianum
abundant on rocks at foot of cliff
J 55 Mitchella repens L.
abundant on rocks at foot of cliff

In the woods are no pine seedlings and very few hemlock seedlings, but in a very small opening, no more than 10 m. across, both are abundant.
In other part of forest on flat Ostrya and Carpinus ca.
Creek flows on south side against very steep wall, covered with forest of Tilia, Tsuga, Acer nigrum v. gl. Ulmus, Oxydendrum, Hamamelis. Boulders at base covered luxuriantly by mosses.
a Polypodium vulgare
a Mitella
c Clintonia
c Hydrangea arborescens
c Dryopteris marginata
c Polystichum acrostichoides
c Adiantum pedatum
c Asarum virginicum
a Mitchella repens.

leaf veins outlined in whitish-green.
— rhizomes creeping on rocks and in humus.
— prostrate, leaves dull green, fruit scarlet.

Aug. 15 - Parker's gap, Pine Mt. 2750'
Young mixed forest, principally Liriodendron, Pinus strobus, P. virginiana, Cornus in understory. Robinia in opener places. a few oaks, Carya, Diospyros and red maple.

Aug. 15 - Blue Ridge Parkway vicinity of Peaks of Otter
Mainly oak forest - largely Q. velutina - Q. alba with Liriodendron at lower alts, Q. rubra at higher. Near tops of ridges ~~tree~~ are lower on west side. taller, more luxuriant on east side.
Road cuts s. of Peaks of Otter completely bare. Robinia barely started along roadside. North of P. o. O. cuts have become weedy and young birches are grown to 1 m. & more tall. Robinia forms dense belt along sides of road.

Aug. 15 - Peaks of Otter station, Blue Ridge Parkway, base of Sharp Top.
Wooded hill just above station - oak forest, mainly Quercus rubra and Q. alba, with a few Carya, Betula lenta, and many large old chestnut stumps.
Canopy complete, perhaps 20 m. tall. Second story 5-10 m. of Cornus florida, some Quercus prinus and Amelanchier.
Shrub layer 0.5 - 1 m. mainly Menziesia pilosa, Rhododendron (Azalea), Nyssa, Kalmia latifolia, Viburnum acerifolium, and Castanea sprouts.
Herb layer - Pyrola americana, Chimaphila maculata, Parthenocissus quinquefolia, Medeola, etc.

Bedford Co.

Aug. 15 Sharp Top Peak, Peaks of Otter - Wooded with oak - hickory practically to top - Quercus rubra, Carya sp. some Q. alba.

1953 Virginia

Labels typed

Betula lenta, ostrya, Prunus serotina, and rarely Liriodendron. Acer spicatum comes in part way up and is common to top.

Summit is of huge bare granite boulders with Tsuga canadensis, etc. between them — Corydalis, Heuchera parviflora, Dennstaedtia, Polypodium vulgare, etc.

Aug. 15 — 100 mile mark on Blue Ridge Parkway, west of Patera Mtn.

Extensive area that has probably been burned not too long ago — now covered by a dense brush 1–2 m. tall, with small Pinus rigida trees scattered through it

34856 Rhododendron catawbiense Michx.
important component of scrub on old burned slope.

57 Gaylussacia baccata (Wang.) K. Koch.
common in scrub on old burned slope

58 Gaylussacia baccata (Wang.) K. Koch
same

59 Pieris floribunda (Pursh) B. & H.
important component of scrub on old burned slope

Bare boulders covered by leathery brown Umbilicaria, in places as much as 1.5 dm. across. Boulders rounded, exfoliating.

Composition of scrub:
Quercus ilicifolia
Rhododendron catawbiense
Kalmia latifolia
Corylus
Hamamelis
Castanea dentata sprouts
Myrica peregrina
Menziesia pilosa
Pieris floribunda
Vaccinium vacillans
Gaylussacia
and occasional Prosopyrosiris
Sassafras albidum
Acer rubrum
Quercus prinus sprouts
Amelanchier

dense shrub 1.5 m. tall.

low loose bush, 0.5 m. tall; fruit black, edible.

same

shrub 0.7 m. tall.

 1953 Virginia

not checked
labels typed

Aug. 16 - Apple Orchard Mt. Trail from Blue Ridge Parkway at 3950' to top at 4224'.
1205 m. 1300 m.
Top, excepting cleared area, a solid forest of dwarf red oak trees, trunks ~~2-4~~ dm. dbh and about 6 m. tall, with some Betula lutea.
Under larger trees is a carpet of Dennstaedtia punctilobula. Between trees a thick scrub of Rhododendron catawbiense about 4 m. tall, with no ground cover at all.
In shade of enormous granite boulders are ferns (Denn. p. + Polypodium vulgare), Heuchera, Clintonia, Allium tricoccum.

34860 Hedyotis purpurea var. longifolia
common along trail

61 Galium latifolium Michx.
common in woods on slope

62 Hedyotis purpurea var. latifolia
common along rocky trail

63 Hedyotis purpurea var. ~~latifolia~~ longifolia
along trail

64 Hedyotis purpurea var. longifolia
along trail

65 Oenothera tetragona
common along trail and in woods

On summit ridge is some Corylus scrub (C. ame.), and in open part Allium cernuum is abundant, with weeds.
Just below summit flat the forest gets taller, but is still mostly red oak (Q. rubra), with open understock of Corylus, Acer pennsylvanicum, Castanea sprouts, Fraxinus. A thick herb layer about 1 m. tall, many species but principally Eupatorium ~~aeticaefolium~~, rugosum, & purpureum, Collinsonia, Dennstaedtia, Asclepias phytolaccoides, etc.
Hedyotis, Campanula amer. + ubiq. along trail.

3950' 1205 m. caespitose

4100' 1250 m. solitary or somewhat caespitose.

4220' 1290 m. caespitose, flowers lavender.

4[illegible]10' 1250 m. caespitose

4200' 1280 m. caespitose. flowers lavender.

plants erect, noticeably glaucous.

1953 Virginia

map checked
Labels typed

34866 Campanula americana
½ occasional in woods

14 67 Salix
occasional in woods

15 68 Salix
rare

11 69
common in thinner places in herb layer in forest.

½ 70 Aconitum
common in forest

13 (71 Umbilicaria
½3 (72 abundant on great granite boulders

14 73 Heuchera parviflora
occasional in shade of great boulders

11 74 Allium
rare in shade of great boulders

½ 75 Cornus
occasional in Carya scrub on summit ridge

Aug. 16 - Blue Ridge Parkway just north of Thunder Ridge (mile post 67) - Steep wooded slopes 30°-45°. - Oak-tulip woods. on steeper slope oak-hay mostly Q. prinus, on 30° slope some Q. velutina, a few Carya. Second story of Cornus florida and Betula

4100' (1250 m.) erect flowers blue-violet.

4150' (1265 m.) shrub 2.5' m. tall, leaves very glaucous beneath.

4130' (1260 m.) shrub 1.5' m. tall. leaves very glaucous beneath

4130' (1260 m.)

4150' (1265 m.) tall arching herbs up to 2.5' m. long, flowers deep violet

rhizome creeping; flowers white.

leafless; fruit green.

shrub ~~2.5~~ 1.5' m. tall.. ~~fruits~~ inflorescences ~~ed~~, mostly without fruit.

lents. Ground layer mostly seedlings of Parthenocissus.
Where slope is gentler, in broad ravines and on boulders in canyon bottom, comp. of all layers becomes richer. On bare rock slopes Sedum telephioides and mosses are abundant.

Nos checked
164 1953 Virginia

Labels typed Aug. 17 - ~~road~~ north side of Rockfish gap, Skyline Drive

34876 Datura stramonium L.
#2 on fill below road ~~cut~~.

#2 77 Polygonum tenue
roadside at base of cut

√1 78 Paronychia montana (Small) B.+H.
on bare road cut

Aug. 17 - Jarman's gap
second growth mixed woods

√1 79 Viburnum prunifolium L.
uncommon

√1 80 Celtis occidentalis L.
uncommon

Aug. 17 - 2 mi. s. of Rocky Top
Overlook, cliffs at head of Big Run
low cliffs of greenstone,
shaded by oaks and hemlocks.

√3 81 Helianthus trachelifolius Mill.
in dense tangled herbaceous
undergrowth under trees
at foot of cliffs

√3 82 Umbilicaria
abundant on greenstone
cliffs.

√3 83 Umbilicaria
abundant on greenstone cliffs

√3 84 Carex
on shaded ledge on cliff

√2 85 Hedyotis purpurea v. longifolia
shaded talus at foot of cliff

~~#~~ much branched herb
1 m. tall, flowers purplish.
erect.

appearing prostrate.
dark green.

sterile shrub 1 m. tall.

sterile shrub 3' m. tall.

herbs ~~#~~ 1.5 m. tall,
rays and disk yellow.

caespitose, leaves
and culms drooping
caespitose

Virginia

34886 Maianthemum canadense Desf.
common at foot of cliffs
and on ledges under hemlocks,
in deep humus.

87 Carex
on ledges in partial shade

Aug. 17 - Big Run Overlook

88 Oenothera biennis L.
common on ~~roadcuts~~
road-cuts and talus

89 Pinus
roadside

90 Cheilanthes lanosa (Michx.) D.C.
ledges of rocky road cut

91 Lanicula marilandica
occasional in shade
of woods along trail

Aug. 17 - Pinefields Shelter
~~stand~~

92 Oenothera biennis L.
common on road cuts
and embankments

93 Crataegus crus-galli L.
common in brushy
flat

tufts

erect flowers
yellow.

tree 8 m. tall.

EATON ~~occipitalis~~

erect.

erect, to 1 m. tall, flowers
yellow, petals reflexed
somewhat at full anthesis,
androecium zygomorphic,
all stamens, 4, micropter.,
all but one deflexed to one
side, style variable
in length - series of spikes
to show variable sepal tips
and ~~petal~~ petal and style lengths.

thickly branched shrub
3 m. tall, fruit immature.

nos. checked
Labels typed

1953 Virginia

34894 Botrychium virginianum (L.) Sw.
occasional in wooded ravine

95 Botrychium dissectum v. dissectum
occasional in bottom of wooded ravine

96 Botrychium dissectum f. obliquum
~~co~~ common in bottom of wooded ravine.

97 Hedyotis purpurea var.
common on rather eroded slope under thin woods

98 Lonicera canadensis L.
common in rather thick woods on slopes

99 Nyssa sylvatica marsh.
in brushy open field

Aug. 18 - Hemlock Springs
roadside in woods

34900 Helianthus decapetalus L.
common in edge of woods

01 Hypericum punctatum Lam.
in edge ~~of spring~~

02 Equisetum ~~arvense var. boreale (Bong.) Trautv.~~ (Muhl.) Willd.
around spring at edge of road

saw a wild-cat cross road here at about 5:30 p.m.

(Muhl.) Willd. only sterile plants seen.

not caespitose.

erect.

small shrubby tree 4-5 m. tall, fruits green, 3-4 in a cluster

erect, rays and disk bright yellow.

erect, flowers pale yellow (almost gone).

~~stems~~ stems erect.
(out of range of var. boreale but has 3angled branches)

Labels typed

Aug. 13 - Big Meadows bog surrounded by dense thicket

34903 Hypericum punctatum Lam.
√1 rare in edges of thicket, low ground.

√1 04 Rosa
rare in edges of thicket

√4 05 Agrimonia gryposepala Walls.
rare in edges of thicket

√1 06 Lycopus uniflorus
rare in wet ground under trees in thicket

√2 07 Cicuta maculata L.
common in open part of bog

√2 08 Aster umbellatus Mill.
local in open part of bog.

√3 09 Eleocharis obtusa (Willd.) Schulte
local in muddy open place in bog.

√4 10 Eleocharis
dominant in muddy open place in brushy part of bog

~~Botrychium~~

√2 11 Isoetes engelmannii
in muddy place thinly covered by Spiraea in bog.

√3 12 Rosa palustris
common in open brushy part of bog

√1 13 Botrychium dissectum
rare in low ground in thicket

erect.

erect

erect.

stem reclining; flowers solitary.

erect herb 1.3 m. tall, with strong oily odor. forming dense colonies several sq. meters; erect, rays white, disk pale yellow.

leaves subangular, glossy. (eaten off by animals)
shrub 1 m. tall, flowers rose pink. leaves slightly glaucous beneath.

1953 Virginia

Shenandoah Nat. Park

1	34914	✓	Osmunda regalis var. spectabilis (Willd.) Gray		forming small hummocks fronds erect.
			rare in open wet part of bog		
√4	15		Dryopteris thelypteris var. pubescens (Lawr.)	Nakai	fronds, esp. fertile ones, strictly erect.
			abundant in open ~~woodly~~ wet part of bog, on sphagnous hummocks.		
√1	16		Galium trifidum var. tinctorium (L.)	T. & G.	stems weakly erect.
			occasional on sphagnous hummocks in wet part of bog.		
√2	17		Ilex verticillata (L.) Gray		shrub 1.5' - 2 m. tall; fruit immature.
			occasional in bog		
√3	18		Vernonia noveboracensis (L.)	Michx.	— erect, simple or branched from base, 1.5 m. tall, flowers deep bright purple.
√2			occasional in open part of bog		— stem ascending, fruit light green, shedding very easily.
√1	19		Trautvetteria occasional in moist low ground in thicket.		
3					
√1	20		Botrychium ~~dissectum~~ multifidum s. silaifolium	(Presl) Clausen	—
			in open meadow around edges of thicket		
5					

Aug 18 - Skyline Drive

The Robinia pseudo-acacia which lines the drive in many parts is rather brown at this season from the attacks of an insect which eats the mesophyll tissue of the leaves.

2

3

1

1953 Virginia

Aug. 23 - Fort Valley, near Passage Creek, Joppa Road, Massanutten Mt

34921 *Limbristylis autumnalis* (L.) R. + S.
on gravel in ~~dry~~ low spot in dry part of stream bed.

Aug. 23 - Fort Valley, 1 mile above Organization Camp Road, Massanutten Mts.
very small patch of *Pinus virginiana*
scattered oak saplings,
common, occasional
anelanchier.
ground layer of
c *Hexpedeza procumbens*
c *Chimaphila maculata*
c *Rosa carolina*
c *Rubus*
lc *Veronica officinalis*
lq *Antennaria plantaginea*
o *Polantilla simplex*
o *Parthenocissus quinquefol.*
o *Leucobryum*
o *Bartramia?*

Aug. 23 - Elizabeth Furnace
Colony of *Oenothera argillicola*
at foot of shale cliffs
of road cut. — On many
Oenothera plants examined
the free tips of the calyx
in unexpanded bud vary

from erect to divergent
at as much as a 45° angle,
and from straight to
incurved. Therefore the
main character separ-
ating this species and
two others (*biennis* and
grandiflora) from the
rest of subg. *Onagra*
will seldom work in
this var; at least. The
divergent character
of the capsules is
evidently good - no
exceptions noted - bases
stand out at 45° or more
from stem. Leaves always
relatively crowded, linear-
lanceolate, subserrate.
Androecium gyppomorphic.

In a ~~dense~~ good
pine patch - *Pinus virginiana*
1-2 dm. dbh, 20-25 m. tall;
5 cm. duff on surface of
light gray soil. 2-3 m. tall
second story of mixed
oak saplings, with a
few *Rhododendron* saplings,
Fraxinus sapling, *Ulmus*
seedlings, occasional
cornus florida. *Vitis* sp.
shrub layer about
1 m. tall or less, of tree (over)

1953 Virginia

Two packed

Labeled typed

seedling and
c Vaccinium vacillans
c Sassafras seedling
lc Gaylussacia baccata
lo Kalmia latifolia
o Viburnum prunifolium
u Acer rubrum seedling
u A. melanchier
u Cercis canadensis seedling
u Rhus toxicodendron
r Crataegus sp.
ground layer, very sparse,
of c Solidago sp.
c Chimaphila maculata
c Parthenocissus quinquefolia
c Polytrichum commune patches
lc Achillea rosette
lc Veronica officinalis

Aug. 30 - Elizabeth Furnace
Fort Valley, Massanutten Mts.
along brook in small ravine

34922 Equisetum pratense Ehrh. small colony,
~~x Equisetum~~ closely gregarious
8 27 Equisetum hyemale var. affine (Engelm.) A.A. Eat. forming dense beds

lc Chrysopsis mariana
o Stylosanthes
o Lespedeza cuneata
o Baptisia australis
lo Potentilla canadensis
lg Chimaphila umbellata
(large dense patch, 10 dm. across)
lg Antennaria neglecta
u Asclepias hypericoides
u Desmodium rigidum
u Lespedeza procumbens
r Lycopodium complanatum
r Galium pilosum
r Hedyotis purpurea v. longifolia
r Linum sp.

stems erect. not scabrous.

erect. firm.

Sept. 6

"Great prairie" open grassy, with scattered shrubs & trees.

Bouteloua hirsuta
B. curtipendula

1953 Wisconsin

n. of
Sept. 6, 10 Pine Bluff, Dane Co.

Sandstone outcrop with Pinus strobus abundant on ridge and slopes. Slopes pastured and mostly open, but with a hybrid swarm of Juniperus virginiana X J. horizontalis scattered over the slopes and outcrops. J. communis v. depressa also present but not entering into the complex. The slopes are fine sand and and Cerchnus is abundant. There are also patches of Selaginella rupestris.

The junipers (Salina) varied in habit from erect, broadly ovoid (J. virginiana x. virginiana) to mat-like patches 1-2 dm. high and 5-8 m. across, with every imaginable intermediate. In other characters such as percentage of hooked "pedicels", degree of apiculation of leaves, range of diameter of epidermal cells, etc.

there is apparently a complete random segregation. There is absolutely no correlation of depressed habit with degree of exposure. One low bent tree, looking like a wind-bent tree of coastal bluffs or ridge tops, was on a slope oriented exactly opposite to what might have been expected if the prevailing exposure had anything to do with it thus

Sept. 6 ½ m. n. of Arena, Iowa Co.
Open prairie with
scattered pine patches
P. banksiana - a square
mile or so.
Mainly grasses
Leptoloma cognatum
Aristida tuberculata
Panicum 1 ind. P. virgatum
several Carexes
C. ~~cephalophora~~ cephalantha
C. scoparia
C. schweinitzii
Carex pensylvanica
Gnaphalium obtusifolium
Monarda ~~fistulosa~~
punctata
Selaginella rupestris
Polygonella articulata
Hieracium longipilum
Polygala polygama
Hudsonia
Lechea
Diodia teres
Solidago 2 sp.
Lespedeza capitata
Ambrosia artemisiifolia

Sept. 6 1 mi. Arena
Swamp with
winding pond & slough
Acer saccharinum
Ulmus
Betula nigra
Carya
Quercus bicol
Salix nigra
Cephalanthus occ.
Rhus toxicodendron

Wide meadows
of mixed herbs
1 - 2 m. tall

1953 Wisconsin

Iowa Co.

Sept. 6 s.w. of Arena, Iowa Co.

"goat prairie" open
slope 30-60°.
Bouteloua hirsuta
B. curtipendula
Leptoloma
andropogon sp.
Sorghastrum nutans
Eragrostis spectabilis
aster sericeus + 2 others
Solidago
Kuhnia eupatorioides
Psoralea
Potentilla arguta
Artemisia
Euphorbia corollata
Petalostemum
Amorpha canescens
Gerardia

Invaded ~~savanna~~ Forest
to by Populus tremuloides
and sparingly by
Rhus, Betula alba, oaks,
Vitis, Juniperus virg.
Rubus, Corylus
Xanthoxylum

ms. checked

1953 Wisconsin

Iowa Co.

Labels typed

Left. 6 half way bet. Arena ~~Blackhawk~~ and Ridgeway, Iowa Co.

34934 J1

Setaria faberii Herrm. common generally along roadsides and in edges of fields

erect & ascending, somewhat caespitose. panicles nodding.

1953 Virginia

Oct. 4 - Between Bull Run and Gainesville, s. side of main highway

Forest of Pinus virginiana trees, pure stand, trees 10 cm.± thick, 15 m. tall. Very little undergrowth - a few seedlings and saplings of Quercus, Fraxinus, etc. and some small Cornus florida.

Sparse ground layer of Chimaphila maculata, Lespedeza procumbens, Galium triflorum, Galium pilosum, ~~Coreopsis~~, Polystichum acrostichoides, Gerardia sp. (purpurea?), Rhus toxicodendron, Rubus (dewberry) etc.

Thin net of Lonicera japonica, esp. near edge. The humus layer is thin, 2 cm.±, thicker near bases of trees.

The whole thing is dry as tinder at this season.